(2)

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SWEEP WIDTH DETERMINATION FOR HU-25B AIRBORNE RADARS: LIFE RAFT AND RECREATIONAL BOAT TARGETS

M. J. LEWANDOWSKI, R. Q. ROBE, A. A. ALLEN, and
W. H. REYNOLDS
U.S. Coast Guard Research and Development Center
Avery Point, Groton, Connecticut 06340-6096

AND

G. L. HOVER, S. A. EXLEY, H. S. SEARLE, and P. V. CLARK
Analysis & Technology, Inc.
190 Gov. Winthrop Blvd, New London, Connecticut 06320-6223

FINAL REPORT

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SAMUEL F. POWEL, III
Technical Director
U.S. Coast Guard Research and Development Center
Avery Point, Groton, Connecticut 06340-6096

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This report is the twenty-sixth in a series that documents the Improvement in Probability of Detection in Search and Rescue (POD/SAR) Project at the U.S.C.G. R&D Center.

16. Abstract

During October and December 1988 the U.S. Coast Guard R&D Center conducted two experiments to determine sweep widths for airborne radar search by Coast Guard HU-25B aircraft. Search objects were 4- to 10-person life rafts and 23- to 42-foot recreational-type boats. Two radar systems were evaluated: the AN/APS-127 forward-looking airborne radar (FLAR) and the AN/APS-131 side-looking airborne radar (SLAR).

Realistic radar searches were conducted in Block Island Sound off the CT/RI/NY coast and in the Atlantic Ocean off Nova Scotia, Canada, to collect data using unalerted sensor operators and standard search patterns. Aircraft and target positions were recorded by a precision microwave tracking system. Target detections and environmental conditions were recorded by observers onboard the search aircraft and the target vessels. Sea conditions represented in the data analysis included 0- to 4-foot significant wave heights and 0- to 28-knot winds.

Data from the 1988 experiments were combined with data collected during 1987 where appropriate. Analysis of the data confirmed that sweep widths varied with significant wave height and target size. Recommended sweep width values and HU-25 electronic search guidance are presented, along with a recommendation for computer simulation to develop POD versus coverage factor curves for HU-25 electronic search planning. Key words

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METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply By	To Find	Symbol
		LENGTH		
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
		MASS (WEIGHT)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
tsp	teaspoons	5	milliliters	ml
tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
		TEMPERATURE (EXACT)		
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

*1 in = 2.54 (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ 286, Units of Weights and Measures. Price $2.25. SD Catalog No C13 10 286.

Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply By	To Find	Symbol
		LENGTH		
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
		AREA		
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
		MASS (WEIGHT)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
		VOLUME		
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	0.125	cups	c
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	35	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
		TEMPERATURE (EXACT)		
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F

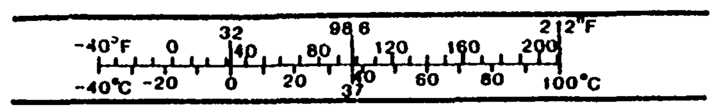

TABLE OF CONTENTS

TABLE OF CONTENTS (Cont'd)

ILLUSTRATIONS

ILLUSTRATIONS (Cont'd)

TABLES

EXECUTIVE SUMMARY

INTRODUCTION

1. Background

This report evaluates the detection performance of the AN/APS-131 side-looking airborne radar (SLAR) and the AN/APS-127 forward-looking airborne radar (FLAR) in detecting 4- to 10-person life rafts and a variety of work and pleasure boats in the 23- to 43-foot range. In support of this evaluation, two experiments were conducted during October and December 1988 by the United States Coast Guard Research and Development Center (R&D Center). Coast Guard Air Station Cape Cod provided HU-25B aircraft equipped with the AN/APS-131 SLAR and the AN/APS-127 FLAR to collect sensor performance data.

This research is a followup to an experiment conducted off Fort Pierce, FL, during June 1987. Data from the 1987 experiment are included in analyses presented in this report where appropriate.

2. AN/APS-127 System Description

The AN/APS-127 FLAR is an X-band air-to-surface search radar developed to detect small targets in a sea clutter environment. Pertinent system data are summarized in table 1. FLAR detection performance data were collected using a 7-inch plan position indicator (PPI) in ground-stabilized mode.

3. AN/APS-131 System Description

The AN/APS-131 SLAR is an X-band surveillance and oil slick detection system derived from the AN/APS-135 SLAR used on Coast Guard HC-130 aircraft. The AN/APS-131 is one of five components that comprise the AN/ASD-6 AIREYE system. Pertinent system data are

Table 1. Radar System Characteristics

SYSTEM	MANUFACTURER	RANGE SCALES (nmi)	PEAK POWER (kW)	SCAN RATE (deg/sec)	PULSE WIDTH/ PRF	CARRIER FREQ. (MHz)	BEAM-WIDTH (deg)
AN/APS-127	Texas Instruments	5, 10, 20, 40, 80, 160	200	720 (120 r.p.m.) search mode	0.5 µs/ 1600 Hz search mode	8500 to 9600	Azimuth: 5.0 Elevation: 6.5
AN/APS-131	Motorola	13.5, 27, 54, 80 (to one or both sides of the aircraft)	200	N/A	0.2 µs/ 750 Hz	9250	Azimuth: 0.8 Elevation: -1.5 to -45

summarized in table 1. The SLAR imagery is produced in a near real-time video format using the AIREYE multipurpose display (MPD) or on a permanent copy dry-silver film.

4. Approach

Data were collected using unalerted sensor operators and standard search patterns. Aircraft and target positions were recorded by a precision microwave tracking system. Target detections and environmental conditions were recorded by observers onboard the search aircraft and a target vessel.

Data reconstruction was performed to determine detection and closest point of approach (CPA) ranges for each target opportunity. Raw data files were developed for each search day and entered into a VAX 11/780 computer for analysis.

FLAR and SLAR detection performance levels were evaluated independently, and combined sensor search performance was estimated analytically. The influence of interactions among primary search parameters of interest was investigated using a sophisticated binary multivariate regression analysis technique.

RESULTS AND CONCLUSIONS

1. Results

A total of 2,951 valid sensor-target interactions reconstructed from the 1987 and 1988 experiments were included in the sweep width analysis. Data quantities categorized by sensor, range scale, and target type are shown in table 2. Sea conditions represented in the data analysis included 0- to 4-foot significant wave heights and 0- to 28-knot winds.

Least-squares fitted lateral range curves and sweep width estimates were developed for each significant sensor/target/search parameter combination identified during data analysis.

Table 2. Number of Searcher/Target Interactions

RADAR SYSTEM	LIFE RAFT TARGETS		BOAT TARGETS	
	20-nmi Range Scale	40-nmi Range Scale	20-nmi Range Scale	40-nmi Range Scale
AN/APS-127 FLAR	398*	156	726†	279
AN/APS-131 SLAR	388	147	596	261

* Includes 59 detection opportunities from the 1987 experiment.
† Includes 120 detection opportunities from the 1987 experiment.

2. Conclusions

- In certain situations, both the AN/APS-127 FLAR and the AN/APS-131 SLAR achieved a more efficient target detection performance when using the 40-nmi range scales. While the 20-nmi range scale provides higher detection probabilities, the 40-nmi scale provides greater sweep widths due to a doubling of the area coverage.

- The target detection performance of both the FLAR and the SLAR degrades significantly when significant wave heights increase from less than 2 feet to 2 to 3.5 feet.

- Target detection probability improved significantly for both the FLAR and the SLAR as target size increased from life rafts to small (22- to 30-foot) boats to medium (32- to 43-foot) boats.

- Methods for applying electronic search effort using the HU-25 must be reconsidered. In some instances, a more efficient way to conduct electronic search would be to perform multiple search patterns in a given area at a lower coverage factor per individual search pattern, vice a single search at coverage factor 1 or greater.

RECOMMENDATIONS

1. AN/APS-127 FLAR Searches

- The sweep widths provided in table 3 should be used to represent AN/APS-127 FLAR search performance for all HU-25A and HU-25B aircraft.

- Although sweep widths in table 3 assume search altitudes of 2000 to 5000 feet, the lowest safe altitude should be used to conduct FLAR searches when sea clutter is present. FLAR searches for small targets at search altitudes above 5000 feet are not recommended.

- The AN/APS-127 operator should frequently reposition the sweep origin when searching in the preferred Ground Stabilized mode. This practice will maximize exposure time for targets that pass close aboard.

2. AN/APS-131 SLAR Searches

- The sweep widths in table 4 should be used to represent AN/APS-131 SLAR search performance for HU-25B aircraft.

- Sweep widths in table 4 assume search altitudes of 2000 to 5000 feet. SLAR searches for small targets at search altitudes above 5000 feet are not recommended.

3. Combined FLAR/SLAR Searches

- The sweep widths in table 5 should be used to represent combined FLAR/SLAR search performance for HU-25B aircraft when the 40-nmi range scales are used.

4. General Recommendations

- Both the FLAR and the SLAR should usually be operated on the 40-nmi range scale during SAR missions.

Table 3. Sweep Widths for AN/APS-127 FLAR

RANGE SCALE (nmi)	TARGET TYPES	SIGNIFICANT WAVE HEIGHTS REPRESENTED (feet)	SWEEP WIDTH (nmi)
10*	6- to 10-person life rafts	< 2	5.4
		2 to 3	1.8
	24- to 43-foot boats	< 2	8.5
		2 to 5	7.2
20	6- to 10-person life rafts	< 2	7.0
		2 to 3	2.8
	23- to 30-foot boats	< 2	14.1
		2 to 3	7.0
	32- to 42-foot boats	< 2	24.9
		2 to 3	15.3
40†	8- to 10-person life rafts	< 2	insufficient data
		2 to 3.5	9.0
	23- to 30-foot boats	< 2	insufficient data
		2 to 3.5	15.0
	32- to 42-foot boats	< 2	insufficient data
		2 to 3.5	23.7

*Based on 1987 data only.
†Based on 1988 data only.

Table 4. Sweep Widths for AN/APS-131 SLAR

RANGE SCALE (nmi)	TARGET TYPES	SIGNIFICANT WAVE HEIGHTS REPRESENTED (feet)	SWEEP WIDTH (nmi)
20*	4- to 10-person life rafts	< 2	13.4
		2 to 4	10.6
	23- to 30-foot boats	< 2	16.9
		2 to 3	11.9
	32- to 42-foot boats	< 2	21.5
		2 to 3	16.8
40*	8- to 10-person life rafts	1 to 3.5	13.3
	23- to 42-foot boats	1 to 3.5	21.4

*Based on 1988 data only.

Table 5. Combined FLAR/SLAR Sweep Widths

RANGE SCALE (nmi)	TARGET TYPES	SIGNIFICANT WAVE HEIGHTS REPRESENTED (feet)	SWEEP WIDTH (nmi)
20	4- to 10-person life rafts	< 2	16.7
		2 to 3	11.7
	23- to 30-foot boats	< 2	21.0
		2 to 3	14.4
	32- to 42-foot boats	< 2	28.9
		2 to 3	21.8
40	8- to 10-person life rafts	2 to 3.5	17.0
	23- to 30-foot boats	2 to 3.5	26.7
	32- to 42-foot boats	2 to 3.5	31.2

- Lesser range scales (20 nmi and 10 nmi) should be used for "narrow" search patterns to take advantage of the higher incremental detection capability in each range interval.

- The 20-nmi or 10-nmi range scales should also be used when high target densities within the search area prevent the radar operators from logging or tagging all contacts of interest.

- Sufficient time should be provided for electronic sensor operators to initialize and adjust equipment before commencing search. Collateral operator duties other than the search task should also be completed before commencing search.

- Search planners should consider assigning two to four radar searches to the HU-25 at large track spacing vice a single search with track spacing equal to sweep width. A useful rule of thumb is to assign track spacing equal to about twice the radar range scale.

5. Recommendation for Future Research

- Computer simulation should be used to examine the relationship between coverage factor (C) and overall probability of detection (POD) for HU-25 radar searches.

ACKNOWLEDGEMENTS

We, the authors, would like to express our appreciation to the many unsung individuals who contributed to the success of this research effort. The persons involved include Coast Guard (military, civilian, auxiliarists, and contractors), local government officials, airport operators, businesses, and innkeepers at the various support locations. We would like to acknowledge the support and cooperation of the First Coast Guard District staff, Coast Guard Station Point Judith, Coast Guard Group Woods Hole, and the Watch Hill Lighthouse Keepers Association without whom the experiment would not have been possible.

We further would like to thank the command and aircrews of Coast Guard Air Station Cape Cod for providing two radar-equipped HU-25B aircraft as the only data collection platforms for this experiment. The cooperation of the Coast Guard R&D Center Facilities and Technical Support Branch in the areas of communications and logistics and the supplying of a target craft is greatly appreciated. The International Ice Patrol provided enthusiastic data recorders as needed for many HU-25B flights. The Coast Guard Auxiliary units of the First Coast Guard District provided 14 boats to use as targets and 9 aircraft to be used for logistics purposes. These units were manned by a total of 79 volunteers who performed in a very professional manner. The activities of the Auxiliary were ably coordinated by CWO Michael A. Pendleton of the First District.

We would like to acknowledge the advice and review provided by Dr. David Paskausky during the planning and analysis phases of this experiment. The time and effort of the following people from the R&D Center; Analysis & Technology, Inc.; Briarpatch Enterprises, Inc.; and Input-Output Computer Services, Inc., was essential to the success of this experiment and is greatly appreciated: Mr. M. Couturier, Mr. J. Gilbert, Mr. J. Glass, Mr. T. Naylor, and Mr. T. Noble. The assistance of the Canadian Coast Guard, Mr. M. Kelly, and NORDCO, Ltd., is gratefully acknowledged for providing the use of their deployed life rafts as targets for the HU-25B during their Severe Weather SAR Experiment offshore Nova Scotia. The help and advice of Mr. B. Dawe of NORDCO, Ltd., is gratefully acknowledged.

CHAPTER 1
INTRODUCTION

1.1 SCOPE AND OBJECTIVES

This report documents a field experiment and subsequent data analysis conducted by the U.S. Coast Guard Research and Development (R&D) Center to evaluate the detection performance, for search and rescue, of the AN/APS-131 side-looking airborne radar (SLAR), which is part of the AIREYE Remote Instrumentation System, and of the AN/APS-127 forward-looking airborne radar (FLAR). These sensors are installed on Coast Guard HU-25B medium-range surveillance (MRS) aircraft.

This experiment, conducted in Block Island Sound from 3 to 28 October 1988 and during a subsequent data collection effort off Nova Scotia, Canada, on 6 and 7 December 1988, was performed as part of the R&D Center's Improvement in Probability of Detection (POD) in the Search and Rescue (SAR) project. Project objectives are to improve search planning and execution, and to evaluate visual and electronic search methods, leeway drift, ocean current drift, and visual distress signals. The FLAR/SLAR evaluation reported here is a continuation of research that began with a June 1987 field experiment off Fort Pierce, FL. The 1987 experiment concentrated on evaluation of the 10-nmi radar range scales with limited data collected using the 20-nmi range scales. This 1988 experiment emphasized evaluation of the 20-nmi range scales with limited data collected using the 40-nmi range scales. Data from the 20-nmi range scale tests have been combined where appropriate.

The research documented in this report was conducted to evaluate the detection performance of the HU-25B radars during realistic searches for 8- to 10-person life rafts and a variety of work and pleasure boats in the 23- to 42-foot range. The governing assumption during data collection and analysis was that "whole system" capabilities including operator, radar, signal processing/display, and aircraft, were being evaluated.

1.2 HU-25B RADAR SYSTEM DESCRIPTIONS

The HU-25B Guardian (depicted in figure 1-1) is a Falcon 20 jet aircraft specially modified to perform the medium-range surveillance missions of the U.S. Coast Guard. These missions include SAR, law enforcement, fisheries patrol, and marine environmental protection. This variant of the HU-25 Guardian aircraft is equipped with both the AN/APS-127 FLAR and the AN/ASD-6 AIREYE multisensor surveillance system. The AIREYE system includes the AN/APS-131 SLAR. Both of the Guardian's airborne radars were evaluated during this experiment. Salient characteristics of these radars are provided in sections 1.2.1 and 1.2.2.

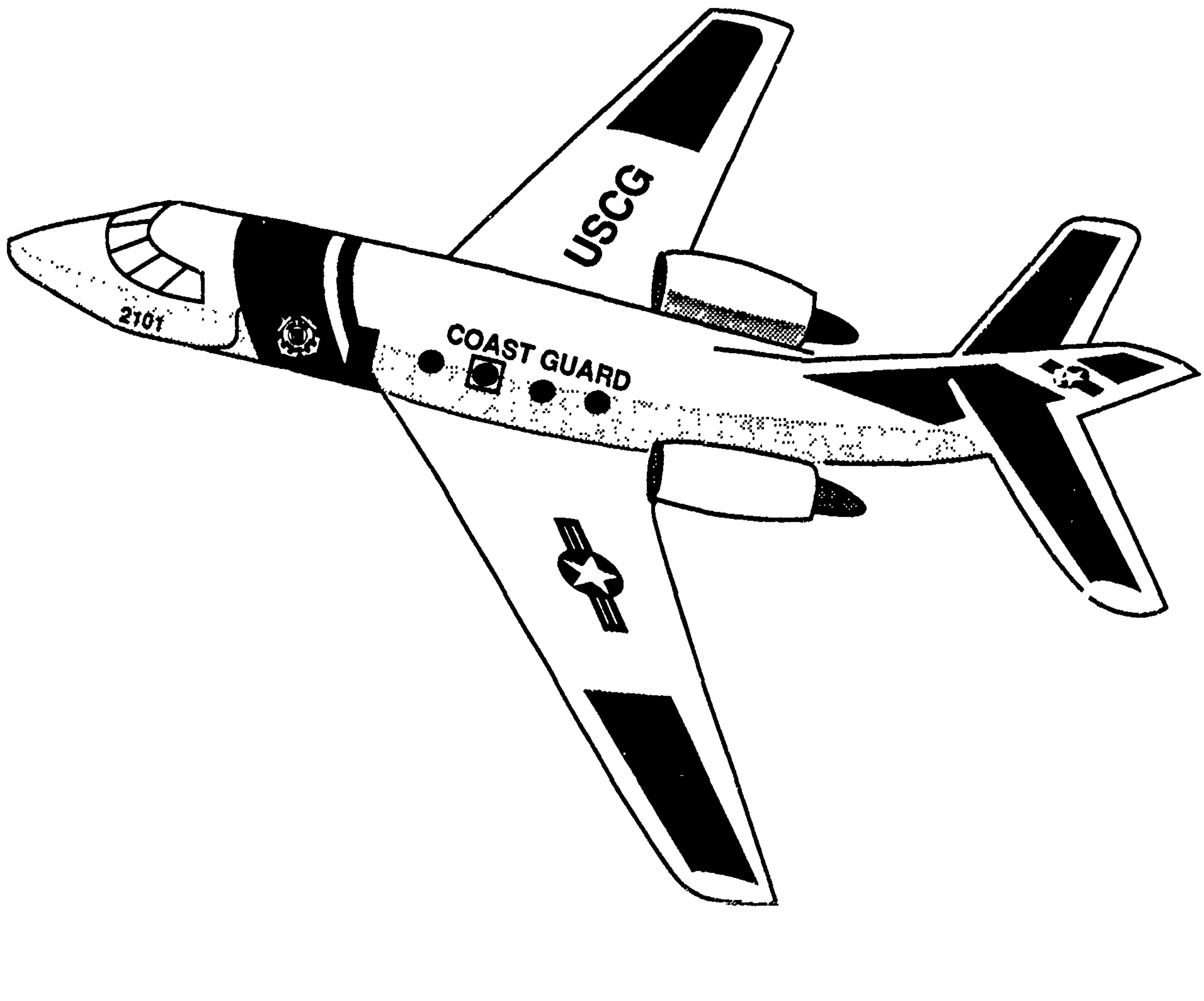

Figure 1-1. HU-25B Guardian Aircraft

1.2.1 AN/APS-127 FLAR

The AN/APS-127 FLAR is an X-band air-to-surface search radar developed to detect small targets in a sea clutter environment. Pertinent FLAR characteristics are shown in table 1-1.

Primary controls for the AN/APS-127 are located on the avionicsman's console in the rear of the HU-25B cabin. A 7-inch plan position indicator (PPI) is located at this station. This PPI is designed primarily for operation in the search mode and was used for all FLAR data collection.

The FLAR system contains special selectable features that may enhance system performance when used correctly. These features include sea clutter envelope processor (CEP), fast time constant (FTC), sensitivity time control (STC), antenna tilt, frequency agility, long or short pulse mode, and heading/north/ground stabilization. Range scales are selectable from 5 to 160 nmi with the option of moving the display origin from its normal centered position to any location on the PPI. The maximum range in the search mode is 40 nmi.

The AN/APS-127 offers three distinct display modes: heading stabilized, ground stabilized, and north stabilized. The heading-stabilized display provides a PPI presentation wherein targets and terrain move relative to the sweep origin, which represents aircraft position. North stabilization aligns the display with magnetic north, and the degree marks around the scope represent magnetic bearings from the aircraft. The ground-stabilized display provides a PPI presentation that is an unchanging view of the earth's surface as long as the selected area remains within radar range. This stabilization mode provides a greater signal gain than the other modes and has been determined to be the best mode for small target search (reference 1). A detailed AN/APS-127 system description can be found in reference 2.

Previous AN/APS-127 experiments were performed in 1983, 1984, and 1987 using Coast Guard HU-25A aircraft. The evaluations of these experiments are found in references 1, 3, and 4. System parameter settings that appear to optimize small target detection performance were determined during the 1983 and 1984 evaluations. Based upon these results and on system

Table 1-1. Radar System Characteristics

SYSTEM	MANUFACTURER	RANGE SCALES (nmi)	PEAK POWER (kW)	SCAN RATE (deg/sec)	PULSE WIDTH/ PRF	CARRIER FREQ. (MHz)	BEAM-WIDTH (deg)
AN/APS-127	Texas Instruments	5, 10, 20, 40, 80, 160	200	720 (120 r.p.m.) search mode	0.5 μs/ 1600 Hz search mode	8500 to 9600	Azimuth: 5.0 Elevation: 6.5
AN/APS-131	Motorola	13.5, 27, 54, 80 (to one or both sides of the aircraft)	200	N/A	0.2 μs/ 750 Hz	9250	Azimuth: 0.8 Elevation: -1.5 to -45

technical documentation (reference 2), the following settings were chosen for use during the majority of data collection.

RANGE:	20 nmi or 40 nmi	MODE:	SEARCH
STAB:	GND	FTC:	as required
FREQ:	FIXED	ANT. TILT:	as required
PULSE:	SHORT	CEP:	as required

The AN/APS-127 system has an interface with the aircraft navigation computer to receive inputs for stabilization and cursor position computation. The AN/APS-127 is not integrated into the AN/ASD-6 AIREYE system but can pass target positions to the AIREYE multipurpose display and to the aircraft navigation computer.

1.2.2 AN/APS-131 SLAR

The AN/APS-131 SLAR is a surveillance and oil slick detection system capable of operation in all weather conditions, day or night. The AN/APS-131 is one of five components that comprise the AN/ASD-6 AIREYE system. Pertinent SLAR characteristics are shown in table 1-1. The SLAR produces an aerial map containing an imagery swath width of up to 160 nmi centered on the ground track of the aircraft. This map is produced in a near real-time video format using the AIREYE multipurpose display (MPD) or on a permanent copy dry-silver film. Both display methods include annotations of critical flight data, aircraft position, and target position (MPD only). AN/APS-131 imagery can be recorded from the AIREYE MPD on a format video receiver for post-operation viewing and processing.

The SLAR radar antenna is designed to provide wide coverage in elevation and very narrow coverage in azimuth. The SLAR antenna is mounted on the aircraft so that it radiates nearly broadside to the aircraft centerline. The imagery produced by this system includes a blind zone centered on the ground track of the aircraft. The width of this blind zone is approximately twice the altitude of the aircraft. A detailed AN/APS-131 system description can be found in reference 5.

An evaluation of a similar radar, the AN/APS-135 SLAR, was performed in 1985 using an HC-130 aircraft. The AN/APS-135 is nearly identical to the AN/APS-131 with the major difference being the use of a longer antenna. A summary of this evaluation can be found in

reference 6. Parameter settings determined to optimize small target detection performance were chosen based upon this evaluation.

The following settings were used during the majority of SLAR data collection.

RANGE:	27 or 54 nmi (control panel)	ANTENNA:	BOTH
	20 or 40 nmi (CDU menu)	DISPLAY:	NORMAL (CDU menu)
DELAY:	0 (both sides)	NAV:	AUTO
PULSE RATE:	AUTO	STC:	as required

1.3 EXPERIMENT DESCRIPTION

1.3.1 Participants

This evaluation was conducted and controlled by the Oceanography Branch of the Coast Guard R&D Center, Avery Point, Groton, CT. A field team consisting of four Coast Guard military and civilian personnel from the R&D Center, one military staff officer from the First Coast Guard District, and seven contractor personnel performed on-site monitor, control, data collection supervision and recording, maintenance and liaison functions. Military personnel from the International Ice Patrol were occasionally used as data collection recorders. The Facilities and Technical Support Branch of the R&D Center provided a 42-foot aluminum-hulled utility boat as a search object/target vessel.

In addition to the bulk of the data collection done during October 1988, three additional search patterns were flown in December 1988 in conjunction with an experiment conducted by the Canadian Coast Guard. This effort was conducted over the Atlantic Ocean, offshore of Nova Scotia, Canada.

The radar systems were installed on two Coast Guard HU-25B aircraft (airframe numbers 2101 and 2103) assigned to Coast Guard Air Station Cape Cod, Massachusetts. Air Station Cape Cod flight crews operated the aircraft and sensors. The normal crew complement included two aviators and two aircrew as sensor operators. Two members of the field team normally accompanied each flight for data collection recording and supervision.

Air Station Cape Cod provided valuable technical support in keeping the aircraft and its sensors in operating condition. This support ensured that virtually 100 percent of the scheduled flights were actually provided.

The F/V George A. Follini was chartered as a work platform/monitoring boat. The Follini was used for daily deployment of four life raft search targets and was itself used as a search object/radar target. The Follini was also used for mooring and retrieval of a miniature meteorological buoy and as a servicing boat for repairs and troubleshooting of the Microwave Tracking System (MTS) transponders which were installed on the other search object/radar target vessels.

The majority of the search object/radar target vessels were provided by members of the Coast Guard Auxiliary, First Coast Guard District. Fourteen boats were operated and crewed by 69 Auxiliarists, who enthusiastically volunteered their time, skill, and effort. Nine Auxiliary air facilities piloted by 10 other Auxiliarists were used in frequent logistics missions. Chief Warrant Officer Michael A. Pendleton, assigned to duties on the First District Boating Affairs staff, had the responsibility for overall coordination of the entire scope of Auxiliary participation. Use of the Coast Guard Auxiliary provided for target vessels of various sizes and types at a substantially lower cost than if all search object/target vessels had to be chartered. The services provided by the Auxiliary pilots fulfilled numerous logistics requirements in a very dependable and expedient manner.

Table 1-2 lists the aircraft and boat resources used in conducting this experiment.

1.3.2 Exercise Area

Block Island Sound was used for the site of the experiment. The R&D Experiment command post, "R&D Control", and MTS master station were located in a temporary structure at Watch Hill Light, Watch Hill, RI. The tracking system repeater stations were located at Coast Guard Station Point Judith, RI, Coast Guard Station Block Island, RI, and Little Gull Island Light, NY. Figure 1-2 depicts the exercise area and MTS station locations.

Table 1-2. Participating Aircraft and Boats

SOURCE	AIRCRAFT/BOAT
Coast Guard Air Station, Cape Cod, MA	CGNR 2101 CGNR 2103
Coast Guard R&D Center	CG 42048
Coast Guard Auxiliary, First Coast Guard District:	
Boats	Bears Kat Burster II Caprice Chalet Chatelaine Gremlin Ho-Hum Little Angel My Last Toy? Sea Trek Serenity Spindrift Top Secret 3-J's
Aircraft	N4DR N105VB N321Q N569FL N1541Z N1483J N1707H N2108C N4841D
Briarpatch Enterprises, Inc., Stonington, CT	F/V George A. Follini

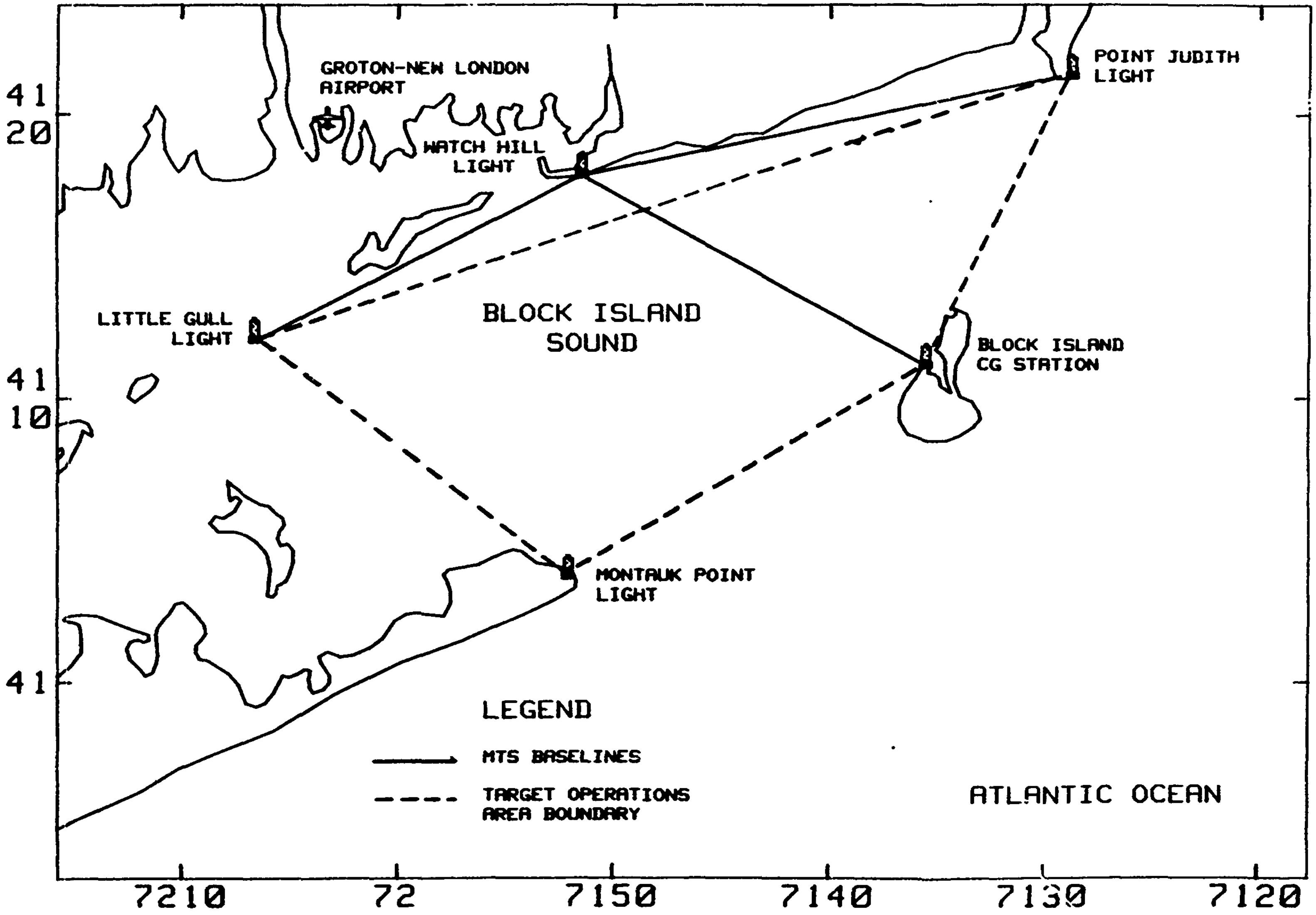

Figure 1-2. Block Island Sound Exercise Area

All search object/target vessels were located within this exercise area. However, actual search tracks assigned to the aircraft for different data collection objectives were not limited to this area. Flight track legs were flown parallel to the long axis of the exercise area with their length extended beyond the exercise area to allow the aircraft time to stabilize on its intended heading in a wings-level attitude before entering the search area. This provided additional target detection opportunities for the FLAR operator before the targets were abreast of the aircraft. To fill all of the radar "range bins" out to the full extent of the 20-nmi or 40-nmi range of the radars, it was necessary to fly flight tracks seaward (south of Montauk, Long Island and Block Island, Rhode Island) of the exercise area (figure 1-3). These flight tracks, which were outside the exercise area, were beyond MTS tracking. Positions from the aircraft navigation computer were used for flight track reconstruction after calibration between aircraft navigation positions and MTS positions inside the exercise area.

As previously mentioned, three search patterns were flown off Nova Scotia, Canada. The pattern flown with target locations indicated is shown in figure 1-4.

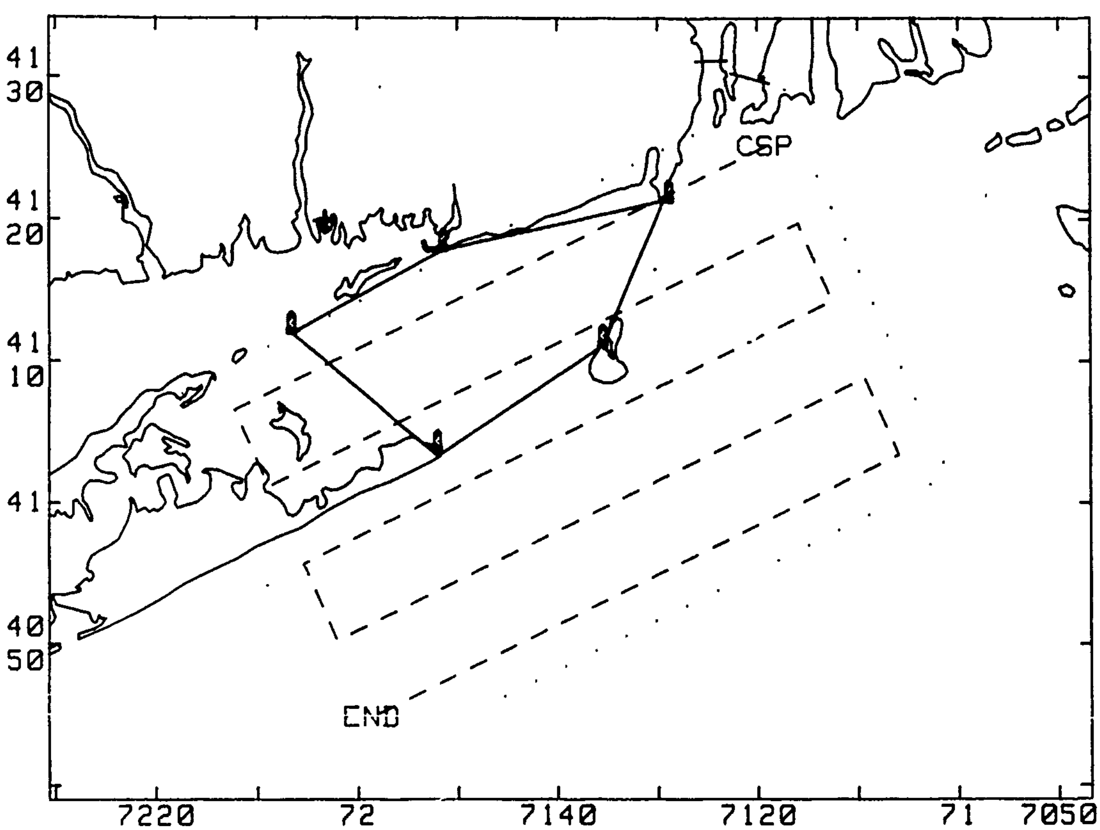

Figure 1-3. Example of Search Pattern Used for Block Island Sound Data Collection

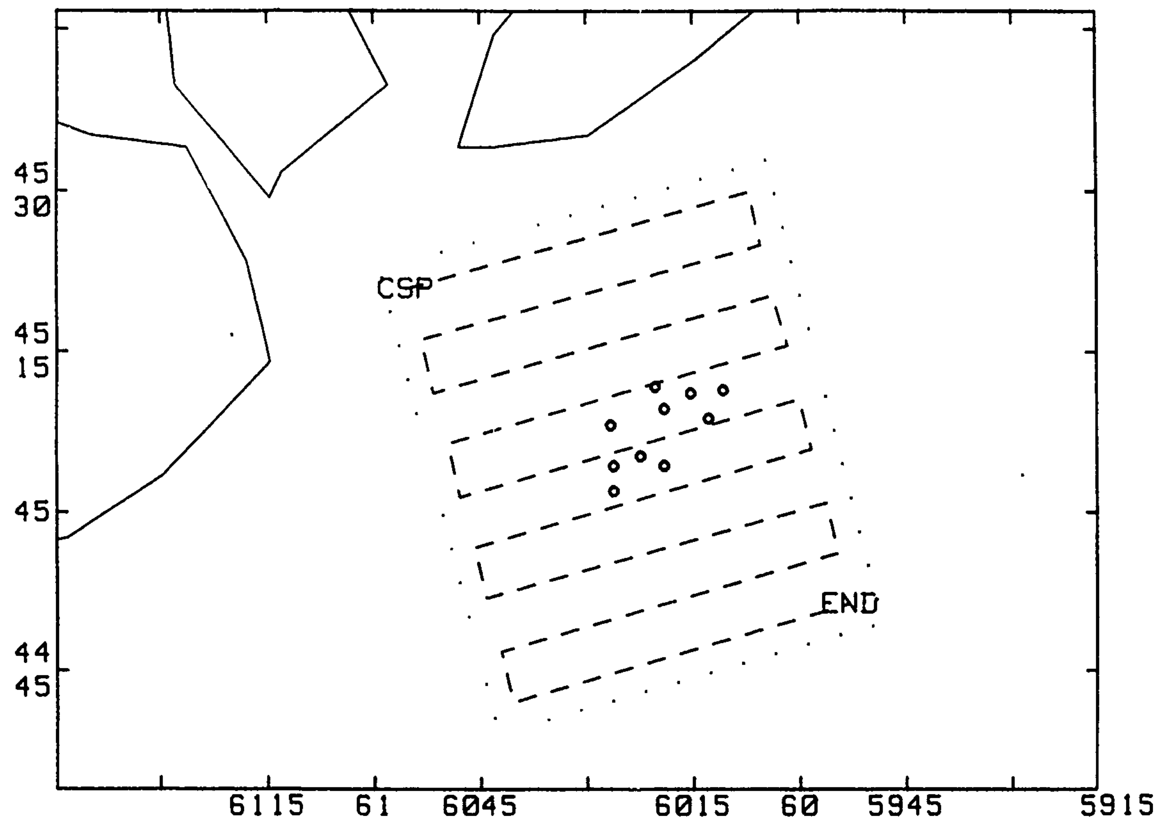

Figure 1-4. Example of Search Pattern Used for Data Collection Off Nova Scotia

1.3.3. Targets

There were 3 types of life rafts (configured with and without radar reflectors) and 16 different boats used as search objects/radar targets during the 1988 Block Island Sound experiment. Target boats ranged in size from 23 to 42 feet length overall and were of various types. This range of target boat types is representative of that encountered in a majority of search and rescue cases.

Characteristics of each target or target type are listed in table 1-3. The radar reflectors used on the life rafts were a LENSREF brand with a 3.3 square meter radar cross section in the X-band. This radar cross section approximated a fully loaded life raft.

For the tests off Nova Scotia, four- and six-person Canada Department of National Defence (DND) life rafts (all with LENSREF reflectors) were used.

Table 1-3. Radar Target Vessel Descriptions

VESSEL NAME	VESSEL DESCRIPTION	PRINCIPAL MATERIAL	DIMENSIONS length x beam x cabin height (feet)
Life raft	4-person Beaufort w/reflector* (Nova Scotia only)	Rubber/fabric	6.75 diam x 3.7 ht
Life raft	6-person Beaufort w/reflector* (Nova Scotia only)	Rubber/fabric	8.5 x 5 x 3.33
Life raft	8-person Givens w/reflector*	Rubber/fabric	7.25 diam x 4.2 ht
Life raft	8-person Givens w/o reflector	Rubber/fabric	7.25 diam x 4.2 ht
Life raft	10-person Switlik w/reflector*	Rubber/fabric	10.5 x 7.5 x 5
Life raft	10-person Switlik w/o reflector	Rubber/fabric	10.5 x 7.5 x 5
Lift raft	10-person Goodrich w/reflector*	Rubber/fabric	9.2 diam/5.25 ht
Life raft	10-person Goodrich w/o reflector	Rubber/fabric	9.2 diam/5.25 ht
Bears Kat	Proline cuddy cabin	Fiberglass	23 x 8 x 7
Little Angel	Sea Sprite cabin cruiser	Fiberglass	25 x 8 x 7
Sea Trek	Proline cuddy cabin	Fiberglass	25 x 10 x 8
Ho-Hum	Marineet sport fisherman	Aluminum	28 x 10.5 x 8.5
Caprice	Cruisers fly bridge sport fisherman	Fiberglass	29 x 11 x 13
Chalet	Trojan sport fisherman	Fiberglass	30 x 11 x 2.5
Top Secret	Sport Craft sport fisherman	Fiberglass	30 x 10 x 9
Gremlin	Pacemaker cabin cruiser	Wood	32 x 11.5 x 14
Burster II	Luhrs fly bridge sport fisherman	Fiberglass	34 x 12.5 x 15
Chatelaine	Silverton sport fisherman	Fiberglass	37 x 14 x 16
My Last Toy?	Albin cabin cruiser	Fiberglass	34 x 11.5 x 8
Serenity	Egg Harbor sedan sport fisherman	Fiberglass	37 x 14.5 x 14
3-J's	Uniflite sport fisherman	Fiberglass	38 x 14 x 15
Geo. A. Follini	Stern trawler	Fiberglass	42 x 13 x 7
CG 42048	42-foot Coast Guard UTB	Aluminum	42 x 14 x 8.5
Spindrift	Hatteras cabin cruiser	Fiberglass	42 x 14 x 21

*These rafts were equipped with LENSREF radar reflectors (3.3 square meter X-band radar cross section) in an attempt to simulate the presence of survivors onboard.

1.3.4 Experiment Design and Conduct

Detection data were obtained by conducting operationally-realistic search missions using the SLAR and FLAR mounted on the HU-25B aircraft. The aircrew and radar operators, following standard Coast Guard procedures, conducted search missions to provide detection performance data that would accurately reflect the detection capabilities of the aircraft configured with the AN/APS-131 SLAR and the AN/APS-127 FLAR while manned by typical Coast Guard air crews searching for typical SAR targets. It must be noted, however, that the use of radar equipment or display features normally used to enhance possible target definition (including momentary range scale changing and offsets providing the radar operator with a "zoom" capability) was discouraged. Also, though the radar operators were "unalerted" to the exact positions of the search targets, the operators were aware of the fact that all targets were located within the exercise area, and operator effort was not expended on searching outside the exercise area.

A daily SAR Exercise (SAREX) instruction was provided to the aircrew with target information and the specific search patterns to be executed. Figure 1-3 provides an example of the type of search pattern used for data collection. Target life rafts were anchored at positions chosen for each day of the exercise so as to vary the range of detection opportunities. Target boats were also positioned within the search area according to data collection requirements to provide a wide variety of possible detection ranges for the radars. Controllable parameters, such as search area, track spacing, altitude, and starting points, were assigned to fulfill specific data collection objectives. Onboard observers recorded essential data and coordinated unit activities with the aircrew and R&D Center control personnel.

The on-scene environmental conditions were recorded by R&D Center personnel onboard the F/V George A. Follini. Environmental conditions were recorded hourly throughout the day or when the conditions changed significantly. Atmospheric and sea conditions were measured by sensors or by estimating, as appropriate, and recorded on an Environmental Conditions Summary (figure 1-5).

Each detection of a target by the SLAR was logged in real time by the operator on a SLAR Detection Log (figure 1-6). Each SLAR detection log entry included detection time and target location as well as radar and aircraft operating parameters. The detections for the FLAR were relayed to an onboard R&D Center observer who logged the detection time, range, and bearing on a FLAR Detection Log (figure 1-7). Aircraft and FLAR operating parameters were also recorded.

ENVIRONMENTAL CONDITIONS SUMMARY

SRU NAME ____________ DATE ____________

TIME	SURFACE WIND		CLOUD COVER (tenths)	VISIBILITY (nmi)	WEATHER DESCRIPTION (clear, rain, fog, etc.)	SEA STATE		(SLAR/SVR) RELATIVE HUMIDITY (%)	AIR TEMPERATURE (°C)
	TRUE SPEED (knots)	TRUE DIRECTION (deg M)				H_S* (feet)	WHITE CAPS (N/S/M)		
**METHOD OF MEASUREMENT									

*Significant wave height.

**Note: Method may be scientific (anemometer, radar, psychrometer, etc.) or an estimate. Indicate method used to measure each parameter.

OBSERVER ____________

Figure 1-5. Environmental Conditions Summary Form

SLAR DETECTION LOG

PAGE ____ OF ____

AIRCRAFT NO. __________

TRANSPONDER CODE __________

SLAR OPERATOR __________

R&D DATA RECORDER __________

SLAR Setup	
ANTENNA: L/R/B*	DISPLAY MODE: NORM*/FULL RES
DELAY: 00*/10/20/40	

DATE __________

SEARCH __________

SPEED __________

ALTITUDE __________

DETECTION/ LEG NUMBER	DETECTION/TURN TIME	TARGET LATERAL RANGE (nmi)	SIDE OF AIRCRAFT (L/R)	SLAR SWATH WIDTH (nmi)	HEADING (deg T/M)	REMARKS

Figure 1-6. SLAR Detection Log

FLAR DETECTION LOG

PAGE ___ OF ___

AIRCRAFT NO. ________

TRANSPONDER CODE ________

FLAR OPERATOR ________

R&D DATA RECORDER ________

PPI Setup/System Operating Mode:

CEP - ON/OFF* DISPL. STAB - REL/NORTH/GND*

FREQ - FIXED*/AGILE MODE - SEARCH* /WX

PULSE - SHORT*/LONG FTC - ON/OFF

DATE________

SEARCH________

SPEED________

ALTITUDE________

DETECTION/ LEG NUMBER	DETECTION/TURN TIME	DETECTION RANGE (nmi)	TARGET BEARING (deg T/R)	RANGE SCALE (nmi)	HEADING (deg T/M)	REMARKS

Figure 1-7. FLAR Detection Log

Each radar detection was verified during post exercise analysis by comparing the reported detections with the known locations of the target craft.

1.3.5 Tracking and Reconstruction

Target locations and aircraft positions were monitored using the automated MTS consisting of a Motorola Falcon 492 system controlled by a Hewlett-Packard desktop computer. This controlling software system was developed by the Coast Guard R&D Center for the POD/SAR Project to provide real time positioning and tracking with search reconstruction accurate to better than 0.1 nmi. A detailed description of the system can be found in reference 7.

The MTS master station for this experiment was located in a temporary office trailer located at the Watch Hill Lighthouse, Watch Hill, RI. The three fixed reference stations were located to the east, southeast, and west of the master station. One was mounted on the lighthouse at Coast Guard Station Point Judith, one on the station house at Coast Guard Station Block Island, and one on the lighthouse at Little Gull Island. These locations, which facilitated line-of-sight tracking of searcher and targets are depicted in figure 1-2.

The trackline of the HU-25B often took it beyond the range of the MTS. When this occurred, the position of the aircraft, as displayed on the onboard computer, was used to reconstruct the track. These positions were recorded once per minute while outside MTS coverage and also as a navigation tie-in two or three times on each search leg while within MTS coverage. These positions were recorded on the Aircraft Position Log (figure 1-8). During reconstruction, all aircraft positions were converted to the MTS coordinate base.

Aircraft (when within MTS range) and target positions were recorded continuously by the computerized tracking system, displayed in real time on a CRT, and recorded on a microcomputer hard disk every 10 to 30 seconds.

Recorded target and aircraft position data were used to generate an accurate geographic representation on an 8- by 12-inch hard copy plot. Target locations were plotted using identifying letters and the aircraft track was identified by dots and plusses. The repetition of the position marks created a trackline for the targets and for the search aircraft. Each position mark could be related to a known time. The time of detection from the detection logs described in section 1.3.4

AIRCRAFT POSITION LOG

Aircraft No. __________ Date __________

Recorder __________ Search No. __________

RNAV Inputs Used ______________________________

TIME (HH:MM:SS)	LATITUDE (DD-MM.M)	LONGITUDE (DDD-MM.M)	SEARCH LEG

Figure 1-8. Aircraft Position Log

was used to locate the search aircraft on the hard copy plot. The range and bearing information for that detection could then be compared to the target positions on the plot, and a detection/miss determination could be made. An accurate lateral range measurement could then be made for each detection or miss. A target was considered an opportunity for detection on any given search leg if the aircraft passed it within the selected radar range scale distance. If a logged target detection could be correlated with the position of the target, it was considered a detection. Otherwise, a miss was recorded for the target on that particular search leg. These detections and misses, along with associated search parameters and environmental conditions, were compiled into computer data files for analysis. These data files are listed in appendix A.

1.3.6 Range of Parameters Tested

The range of potentially significant parameters tested for each sensor (including both the 1987 data and the 1988 data analyzed in this report) is shown in table 1-4. This table includes controllable aircraft/sensor parameters (time on task, altitude, range scale), environmental parameters expected to influence radar performance (wind speed and wave height), and target type/size. Search speed was typically held constant at 225 knots ground speed for all data collection, although variations between 181 and 298 knots occurred.

Table 1-4 does not include environmental conditions encountered on 7 December 1988. On this day, wind speed ranged from 22 to 33 knots and significant wave heights varied between 9 and 10 feet. Although 70 SLAR and 72 FLAR detection opportunities were generated for life raft targets on that day, no detections occurred. These data were not included in the sweep width analysis due to the extreme sea conditions encountered and their obvious impact on detection performance.

Range scale and search altitude were the only selectable parameters varied during data collection so that statistically significant sample sizes could be generated. Other sensor parameters such as display stabilization or pulse were fixed at the settings listed in sections 1.2.1 and 1.2.2 while CEP, STC, and FTC were optimized by the radar operators as needed.

The only potentially significant human factor investigated for its influence on detection performance was time on task.

Table 1-4. Range of Parameters Tested

SENSOR	TARGET TYPE	RANGE SCALE (nmi)	TIME ON TASK (hrs)	WIND SPEED (knots)	SIG. WAVE HEIGHT (feet)	SEARCH ALTITUDE (feet)
AN/APS-127 FLAR	23- to 42-foot boats	20	0.0 to 2.0	0.0 to 23.0	0.0 to 3.0	500 to 5700
		40	0.0 to 2.1	9.5 to 28.0	1.0 to 3.0	2000 to 4000
	4- to 10-person life rafts	20	0.0 to 2.0	0.0 to 23.0	0.5 to 3.0	500 to 5700
		40	0.0 to 2.1	9.5 to 28.0	0.0 to 3.5	2000 to 4000
AN/APS-131 SLAR	23- to 42-foot boats	20	0.0 to 1.9	0.0 to 23.0	0.0 to 3.0	2000 to 5000
		40	0.0 to 1.9	9.5 to 28.0	1.0 to 3.5	2000 to 4000
	8- to 10-person life rafts	20	0.0 to 1.9	0.0 to 23.0	0.5 to 2.0	2000 to 5000
		40	0.0 to 1.9	9.5 to 28.0	1.0 to 3.5	2000 to 4000

NOTE: Search speed was held constant at approximately 225 knots ground speed. Selectable FLAR and SLAR parameters not listed above were fixed at the settings listed in section 1.2.2.

1.4 ANALYSIS APPROACH

1.4.1 Measure of Search Performance

The primary performance measure currently used by SAR mission coordinators to plan searches is sweep width (W). Since this radar evaluation was intended to support improved Coast Guard SAR mission planning, W was chosen as the measure of radar search performance to be developed during data analysis. Sweep width is a single-number summation of a more complex range/detection probability relationship. Mathematically,

$$\text{Sweep Width (W)} = \int_{-\infty}^{+\infty} P(x)dx \ ,$$

where

x = Lateral range or closest point of approach to targets of opportunity (see figure 1-9), and

P(x) = Probability of detection at lateral range x.

Figure 1-10 shows a typical P(x) curve as a function of lateral range. In this figure, x is the lateral range of detection opportunities.

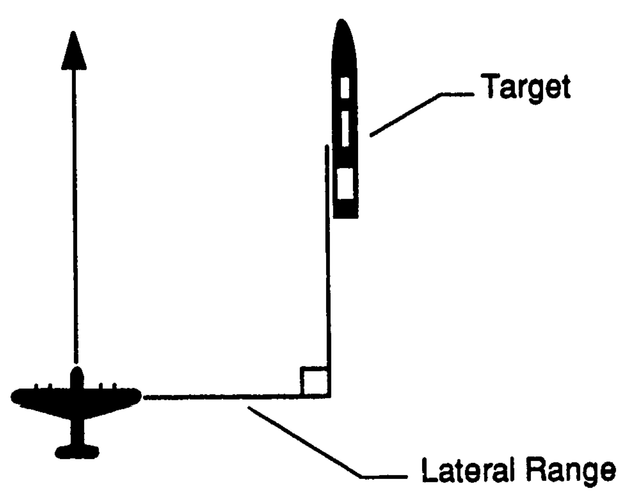

Figure 1-9. Definition of Lateral Range

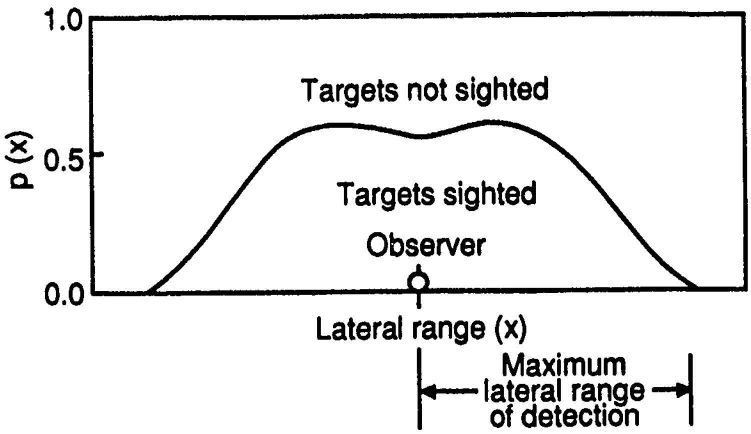

Figure 1-10. Relationship of Targets Detected to Targets Not Detected

Conceptually, sweep width is the numerical value obtained by choosing a value of lateral range less than the maximum detection distance for any given sweep so that scattered targets that may be detected beyond the limits of W are equal in number to those that may be missed within those limits. Figure 1-11 (I and II) illustrates this concept of sweep width. The number of targets missed inside the sweep width distance is indicated by the shaded portion near the top middle of the rectangle (area A); the number of targets sighted beyond the sweep width distance out to maximum detection range (R_D) is indicated by the shaded portion at each end of the rectangle (areas B). Referring only to the shaded areas, when the number of targets missed equals the number of targets sighted (area A = sum of areas B), sweep width is defined. A detailed mathematical development and explanation of sweep width can be found in reference 8.

1.4.2 Analysis of Search Data

Three primary questions were addressed in the analyses of FLAR and SLAR detection data.

1. What target-, sensor-, platform-, and environment-related parameters exerted significant influence on the detecdon performance of the two radars?

2. What are the individual FLAR and SLAR sweep width estimates for various combinations of significant parameters identified during step 1?

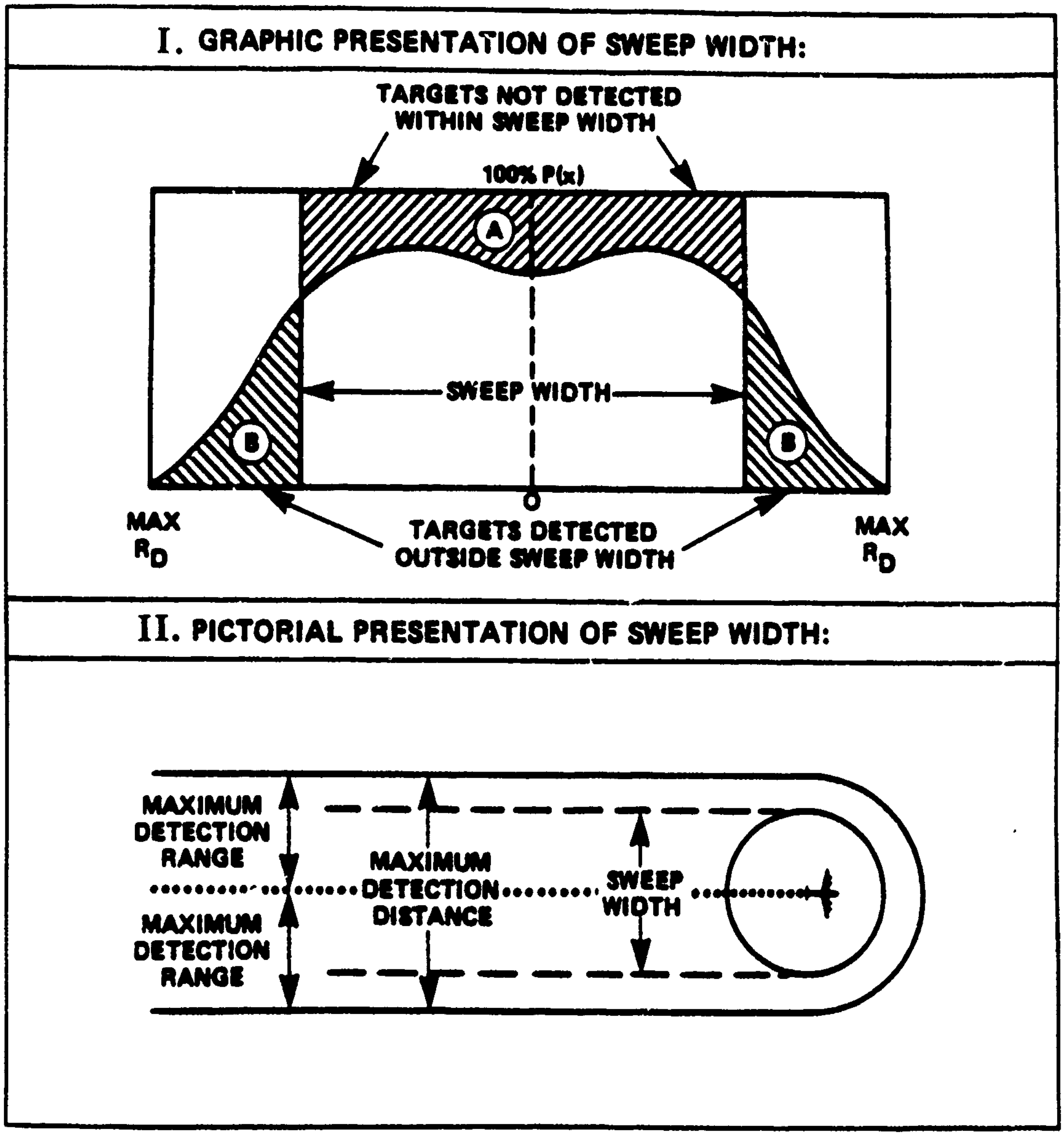

Figure 1-11. Graphic and Pictorial Presentations of Sweep Width

3. What are the combined FLAR/SLAR sweep widths for various combinations of significant parameters identified during step 1?

1.4.2.1 Development of Raw Data

During data reconstruction, detection range and closest point of approach (i.e., lateral) range for each target opportunity were determined by referring to logs kept by the observers and radar

operators onboard the search aircraft and to MTS-generated position/time plots for each search. When the time, range, and relative bearing of a contact reported by the radar operators agreed with the MTS plot, a target detection was recorded. These detections were evaluated by the analysts using all available information from logs, tracking system, and narratives using a convergence of evidence approach in borderline detection opportunity situations. Actual detection ranges were measured on the MTS plot directly from the trackline position of the aircraft to the target position at the time of contact. Lateral ranges were measured from the target to the nearest point on the trackline of the aircraft. Similarly, any targets that passed within the selected FLAR or SLAR range scale limit and were not detected were recorded as a "miss." This reconstruction procedure was applied to each radar independently so that separate FLAR and SLAR data bases were developed. Each leg of a search pattern was considered a new set of target detection opportunities.

The lateral range, environmental conditions, target type, time on task, and other search parameters of interest were recorded along with the detection/miss indicator. A separate raw data file that included all valid target detections and all misses that met the above criterion was developed for each search day. These data files were entered into a VAX 11/780 computer for analysis. Copies of these raw search data files are included in appendix A.

1.4.2.2 LOGODDS Multivariate Regression Model

The influence of interactions among the primary search parameters of interest was investigated using a sophisticated binary, multivariate regression analysis technique (LOGODDS).

The linear logistic (LOGODDS) model was selected as an appropriate analysis tool for fitting POD/SAR Project search data where the dependent variable is binary (i.e., detection/no detection). The LOGODDS model, based on work by Cox (Reference 9), is useful in quantifying the relationship between independent variables (x_i) and a probability of interest, R (in this case the probability of detecting a target). The independent variables (x_i) can be continuous (e.g., range, wave height, wind speed) or binary (e.g., high/low altitude, Search and Rescue Unit (SRU) type 0 or 1). The LOGODDS model has been used with great success in previous POD/SAR Project visual search performance analyses. It was used in the FLAR/SLAR analysis because of its proven analytical power to identify significant search parameters and to quantify their influence on target detection probability. For reasons that will be explained shortly, the LOGODDS model was not used to fit lateral range curves to most of the FLAR and SLAR detection data.

The equation that the LOGODDS model uses for target detection probability is

$$R = \frac{1}{1 + e^{-\lambda}},$$

where

$\lambda = a_0 + a_1x_1 + a_2x_2 + a_3x_3 \ldots,$

a_i = constants (determined by computer program), and

x_i = independent variable values.

The LOGODDS model has the following advantages over other candidate models/techniques.

1. The model implicitly contains the assumption that $0 \leq R \leq 1.0$, whereas, a linear model does not unless the assumption is added to the model (and then computation can become very difficult).

2. The model is analogous to normal-theory linear models; therefore, analysis of variance and regression implications can be drawn from the model.

3. The model can be used to observe the effects of several independent or interactive parameters that are continuous or discrete.

4. A regression technique is better than nonparametric hypothesis testing, which does not yield quantitative relationships between the probability in question and the values of independent variables.

The primary disadvantages of the LOGODDS model are:

1. For the basic models, the dependent variable (R) must be a monotonic function of the independent variables. This limitation became significant during the FLAR/SLAR data analysis because the lateral range versus target detection probability relationships usually contained maxima and were therefore not monotonic.

2. The computational effort is substantial, requiring use of computer resources at the mini-mainframe level.

Appendix A of reference 10 provides a more detailed description of the LOGODDS model.

Variables (other than lateral range) included in the LOGODDS data analysis for this experiment were those that had demonstrated a significant influence on AN/APS-127 FLAR and AN/APS-135 SLAR search performance during previous experiments (references 1, 3, 4, and 6). The variables evaluated were:

1. Wind speed
2. Significant wave height*
3. Search altitude
4. Range scale
5. Target type and size
6. Time on task

Controllable variables, other than those previously listed (such as search speed and FLAR display stabilization mode), were either held constant or adjusted as required by the sensor operators to achieve optimum small-target detection performance. Such variables were not considered in the data analysis.

1.4.2.3 Least-Squares Curve Fits

Inspection of the raw data for many target/sensor/range scale combinations indicated that the monotonic curve shape to which the LOGODDS model is constrained would not adequately represent the observed radar detection performance as a function of lateral range. Figures 1-12 and 1-13 illustrate the problem encountered. Whereas, the LOGODDS model attempts to fit a monotonically increasing or decreasing S-shaped lateral range curve similar to those illustrated in figure 1-12, the raw data in most cases indicated that the unimodal, or peaked, lateral range curve shape depicted in figure 1-13 was more appropriate.

In order to fit a lateral range curve to the detection data that exhibited unimodal response, an appropriate fitting function had to be identified. During analysis of the 1987 FLAR and SLAR data, it was found that the function

$$P(x) = \frac{A^C}{(x - B)^2 + A^D},$$

---

*Significant wave height is defined in reference 11 as the height (in feet) an experienced observer will give when visually estimating the height of waves at sea.

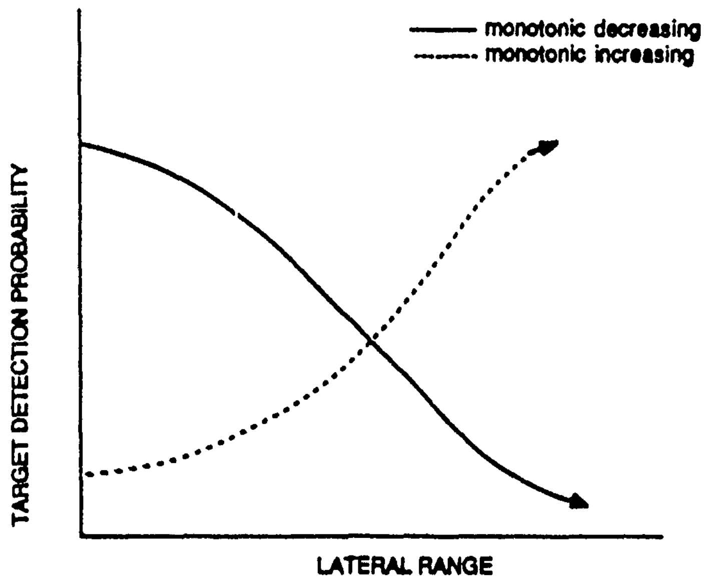

Figure 1-12. S-Shaped Curves

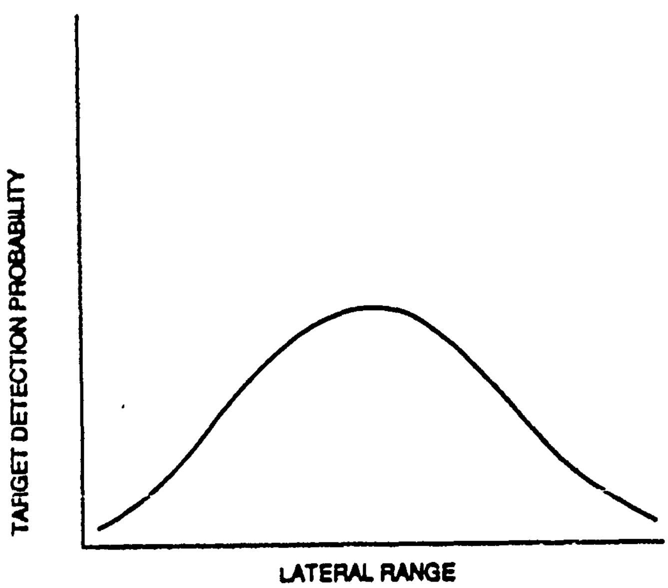

Figure 1-13. Unimodal Curve

where A, B, C, and D are regression variables and x is lateral range, could be fitted satisfactorily to all of the unimodally behaved data sets using Marquardt's least-squares regression method (see reference 12). This technique was used to develop the lateral range curves and sweep widths that appear in chapter 2.

Although necessary to accommodate the unimodal curve shapes, the least-squares regression method previously described is a less satisfactory means of analyzing detection data than the LOGODDS regression method. Specifically, the least-squares method has the following limitations that LOGODDS does not.

1. The least-squares technique fits a function to a single, independent variable only (lateral range in this case), instead of to multiple parameters of interest. The effects of other parameters cannot be identified or quantified.

2. The binary detection/miss data must be binned into lateral range intervals, each of which should contain a reasonable number of detection opportunities, before being input to the regression model.

3. The least-squares regression variables (A, B, C, and D) have no physical significance relative to the detection process: they simply serve to adjust the fitting function's response to the independent variable lateral range.

These limitations require that the detection data be subjected to a multi-step analysis using the LOGODDS regression model initially to identify variables, other than lateral range, that exerted significant influence on target detection probability. This could be done because, even though detection probability demonstrated unimodal response to the lateral range parameter, a monotonic response could still be expected relative to other parameters, such as search altitude, target type, and wave height. Variables identified as significant during this LOGODDS analysis were stratified into meaningful levels to create data subsets that were, in turn, binned on lateral range. Finally, the x-y pairs of lateral range and target detection probability obtained in this manner were input to a computerized, least-squares regression program along with reasonable starting estimates for the regression variables A, B, C, and D. Using this three-step process, lateral range curve functions were developed for various combinations of sensor, range scale, target type, search altitude, and environmental conditions.

1.4.2.4 Sweep Width Calculations

The lateral range curve functions obtained using the procedures described in sections 1.4.2.2 and 1.4.2.3 were integrated over appropriate radar range scale limits to obtain single-sensor sweep widths.

For FLAR sweep widths using the 20- and 40-nmi range scales, the applicable least-squares fitting function was integrated over the limits 0 to ±20 or ±40 nmi (as appropriate) to obtain W.

For SLAR sweep widths using the 20- and 40-nmi range scales, the applicable least-squares fitting function was integrated over the limits ±0.8 to ±20 or ±40 nmi (as appropriate). The SLAR blind zone was assumed to extend ±0.8 nmi to both sides of the aircraft, which yields a conservative sweep width estimate for search altitudes of 2500 to 4500 feet.

Combined FLAR/SLAR sweep widths were estimated for the 20- and 40-nmi range scales by combining the applicable lateral range curve functions as described below.

1. The combined target detection probability P_C assuming completely independent sensors was computed at 0.1-nmi lateral range increments. The equation for this is

$$P_C(\text{independent}) = 1 - \{[1 - P(\text{FLAR})]\,[1 - P(\text{SLAR})]\}\ .$$

2. The higher value of P(FLAR) and P(SLAR) was determined at each 0.1-nmi lateral range increment. This represents the assumption of complete correlation between sensors; that is, if the "weaker" sensor detects a particular target at lateral range x, the "stronger" sensor will also surely detect that same target at lateral range x. This higher of two probabilities can be expressed as

$$P_C(\text{correlated}) = \text{MAX}\ [P(\text{FLAR}), P(\text{SLAR}]$$

for each lateral range increment.

3. Since the actual degree of correlation between the FLAR and SLAR sensors is indeterminate, a reasonable estimate of combined sensor target detection probability at lateral range x is given by the "Vassel Average" (reference 13) of the two values described in steps 1 and 2 as

$$P_C(x) = \frac{P_C(\text{independent}) + P_C(\text{correlated})}{2} .$$

After the combined FLAR/SLAR lateral range curves were obtained as previously described, combined-sensor sweep widths were obtained by numerical integration using Simpson's Rule.

CHAPTER 2
TEST RESULTS

2.1 INTRODUCTION

A total of 2,951 valid sensor-target interactions reconstructed from the 1987 and 1988 experiments were included in the sweep width analysis. Data quantities are categorized by sensor, range scale, and target type in table 2-1. Data quantities in table 2-1 pertaining to the SLAR reflect elimination of targets occurring within the assumed blind zone to either side of the aircraft. Data collected on 7 December 1988 off Nova Scotia are not included in table 2-1 nor in the sweep width analysis. On that day, of 70 life raft detection opportunities, none were detected on SLAR and of 72 life raft detection opportunities, none were detected on FLAR. Seas were much rougher than those represented in the main body of data, averaging 9 to 10 feet (see section 1.3.6).

Table 2-1. Number of Searcher/Target Interactions

RADAR SYSTEM	LIFE RAFT TARGETS		BOAT TARGETS	
	20-nmi Range Scale	40-nmi Range Scale	20-nmi Range Scale	40-nmi Range Scale
AN/APS-127 FLAR	398*	156	726†	279
AN/APS-131 SLAR	388	147	596	261

* Includes 59 detection opportunities from the 1987 experiment.
† Includes 120 detection opportunities from the 1987 experiment.

2.2 DETECTION PERFORMANCE

Sections 2.2.1 through 2.2.3 present results of the AN/APS-127 FLAR, AN/APS-131 SLAR, and combined FLAR/SLAR analyses of detection performance. Lateral range curve fits and sweep width estimates are provided for each sensor/target/search parameter combination analyzed. The LOGODDS regression analysis found target type to exert a significant influence on target detection probability, leading to a breakdown by target type/size for each radar.

The lateral range curves depicted in figures 2-1 through 2-20 show lateral range from the aircraft along the horizontal axis and target detection probability along the vertical axis. The figures expressed as ratios represent the number of detections over the total number of target detection opportunities occurring in a particular lateral range interval. These ratios correspond to the target detection probability achieved for that interval. Each plotted probability is denoted by an asterisk (*). The vertical bar through each asterisk denotes the 90-percent confidence limits on the plotted detection probability. On most of the plots, the location of each asterisk along the horizontal axis is the average of the lateral ranges for the target detection opportunities occurring within a 2-nmi (for 20-nmi radar range scale data) or 5-nmi (for 40-nmi radar range scale data) lateral range "bin."

2.2.1 AN/APS-127 FLAR Detection Performance

2.2.1.1 FLAR Detection of Life Rafts

Figures 2-1 and 2-2 depict the raw detection data and least-squares fitted lateral range curves for FLAR detection of life rafts when the 20-nmi range scale was used. Significant wave height was the only search variable in the life raft data set that was found during LOGODDS regression analysis to exert significant influence on target detection probability. Figure 2-1 provides the lateral range curve for significant wave heights less than 2 feet, and figure 2-2 provides the lateral range curve for significant wave heights of 2 to 3 feet . The presence or absence of LENSREF radar reflectors (used in an attempt to simulate the presence of survivors onboard the rafts) was not found to be significant. Use of LENSREF radar reflectors was not intended to simulate a survival radar system.

Comparison of the two lateral range curves indicates that detection performance against these small targets degraded markedly with even a small increase in sea return.

Figure 2-3 illustrates the life raft detection performance achieved using the 40-nmi range scale of the AN/APS-127 FLAR. Significant wave height was the only search variable found to exert significant influence on target detection probability. There was also some indication that using a 2500-foot search altitude resulted in significantly higher target detection probability than using a 4000-foot search altitude, but this influence was not exhibited in any other life raft data set analyzed. The data indicate marginal life raft detection capability over the entire 40-nmi lateral range interval when significant wave heights were 2 to 3.5 feet. A lateral range curve for significant wave heights less than 2 feet could not be computed because only 28 detection opportunities were obtained under these conditions.

2.2.1.2 FLAR Detection of Boats

Figures 2-4 through 2-9 depict the raw detection data and least-squares fitted lateral range curves for FLAR detection of 23- to 42-foot boats. Significant wave height and target size were the search variables found during LOGODDS regression analysis to exert a significant influence on target detection probability. Figures 2-4 through 2-6 provide lateral range curves for 23- to 30-foot targets. Figures 2-7 through 2-9 provide lateral range curves for 32- to 42-foot targets.

Figures 2-4 and 2-5 provide lateral range curves for FLAR (20-nmi range scale) detection of 23- to 30-foot boats. Comparison of figures 2-4 and 2-5 illustrates the degradation in small boat detection performance caused by a moderate increase in sea return. Target detection probability was halved at most lateral ranges by sea clutter. At lateral ranges near the middle of the 20-nmi range scale, however, detection performance did not drop as much with the onset of sea clutter This may be due to the longer exposure time afforded these targets by the PPI display format (see reference 4 for a detailed discussion of this effect).

Figure 2-6 provides an <u>estimated</u> lateral range curve for FLAR (40-nmi range scale) detection of 23- to 30-foot boats in 2- to 3.5-foot seas. The fitted lateral range curve depicted is based on data sorted into only four, 10-nmi lateral range bins due to the limited data quantity available (only 61 detection opportunities over a 40-nmi lateral range interval). A lateral range curve for the 40-nmi FLAR range scale and seas less than 2 feet could not be computed for the small boat targets because only 11 detection opportunities were obtained under these conditions.

Figures 2-7 and 2-8 provide lateral range curves for FLAR (20-nmi range scale) detection of 32- to 42-foot boats. Comparison of figures 2-7 and 2-8 reveals that target detection probability decreased about 40 percent at most ranges with the onset of moderate sea return.

Figure 2-9 depicts the lateral range curve for FLAR (40-nmi range scale) detection of 32- to 42-foot boats in 2- to 3.5-foot seas. Figure 2-9 indicates that target detection performance was best at lateral ranges less that 24 nmi, but that target detection probability remained above 10 percent out to the limits of the 40-nmi range scale. A lateral range curve for the 40-nmi FLAR range scale in seas less than 2 feet could not be computed for the larger boat targets because only 35 detection opportunities were obtained under these conditions.

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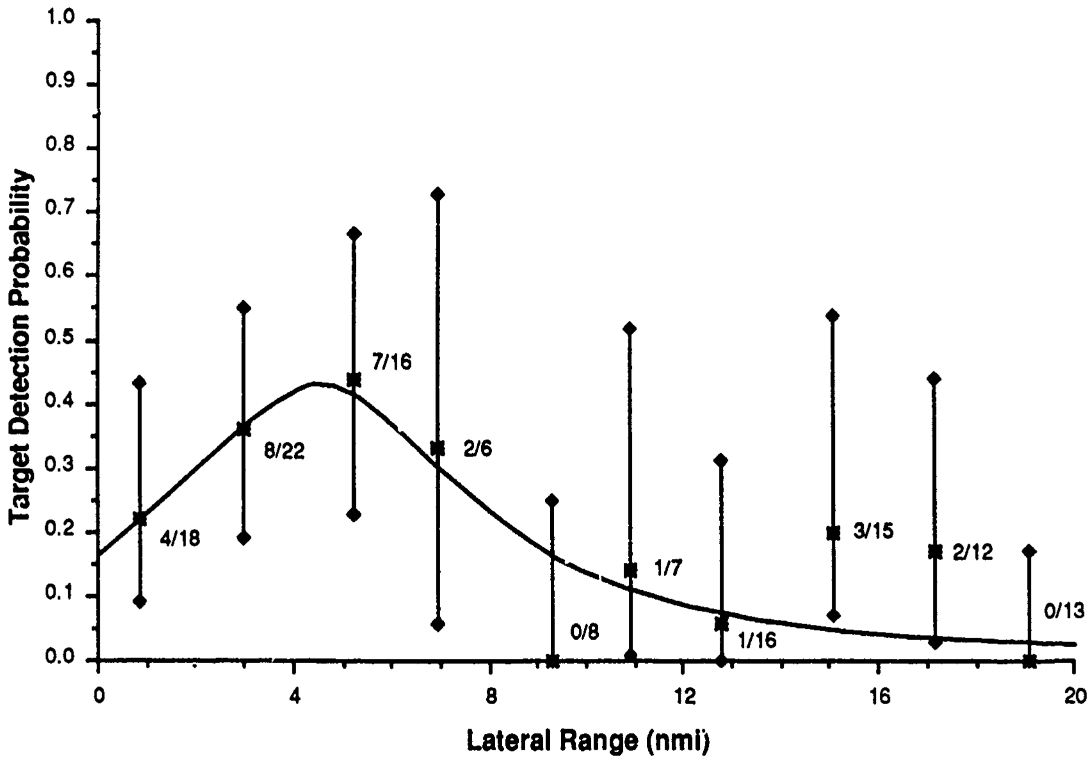

Figure 2-1. AN/APS-127 FLAR Detection of Life Rafts
(20-nmi range scale; seas less than 2 feet)

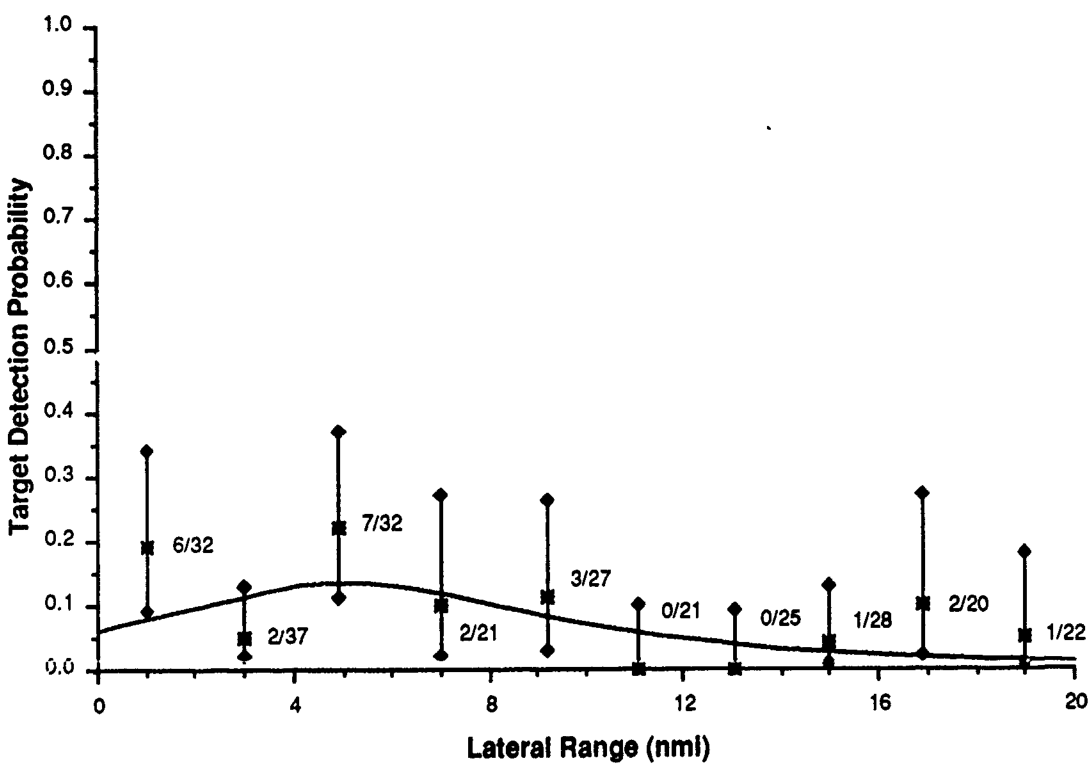

Figure 2-2. AN/APS-127 FLAR Detection of Life Rafts
(20-nmi range scale; seas 2 to 3 feet)

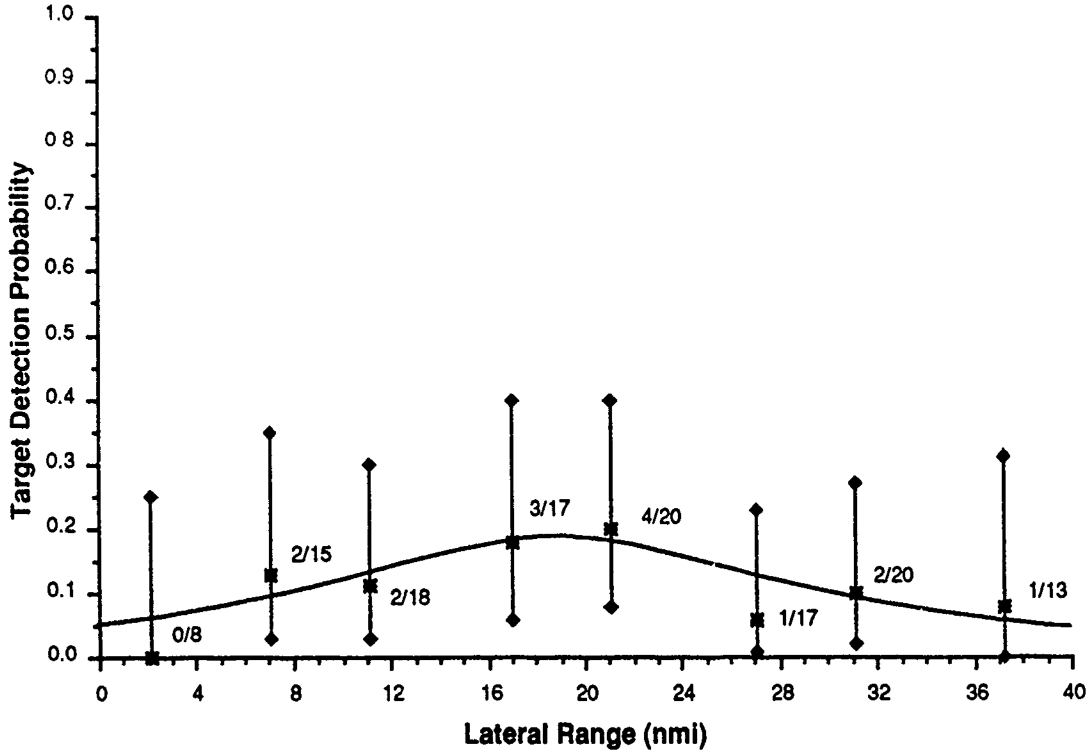

Figure 2-3. AN/APS-127 FLAR Detection of Life Rafts
(40-nmi range scale; seas 2 to 3.5 feet)

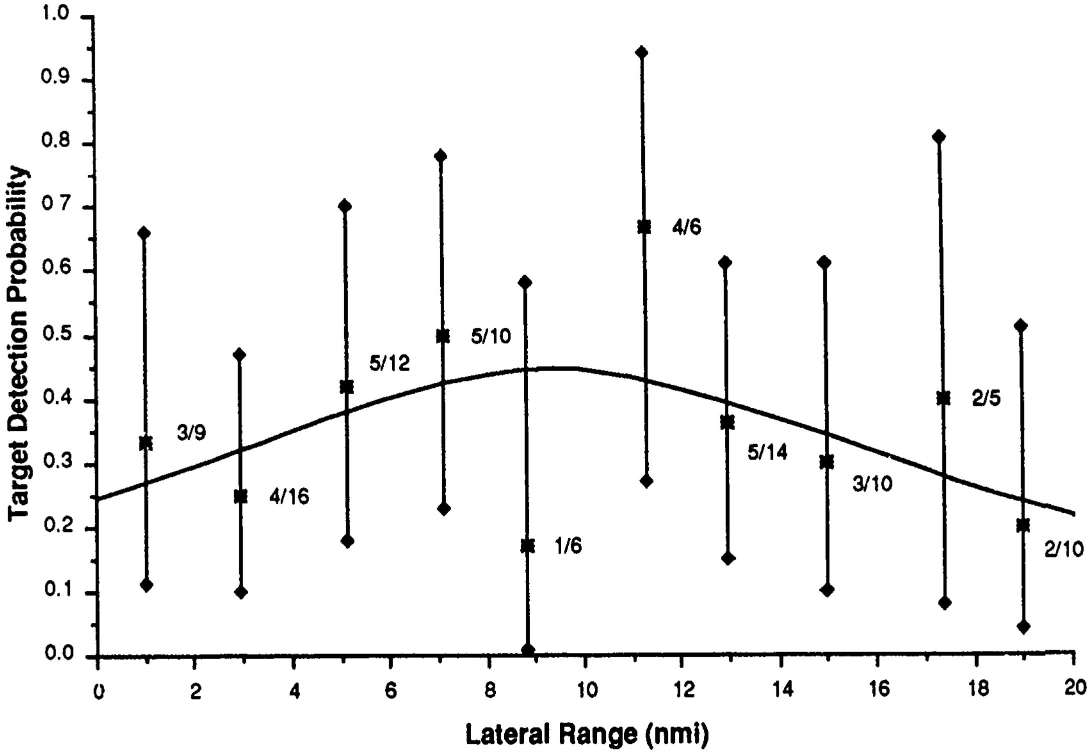

Figure 2-4. AN/APS-127 FLAR Detection of 23- to 30-Foot Boats
(20-nmi range scale; seas less than 2 feet)

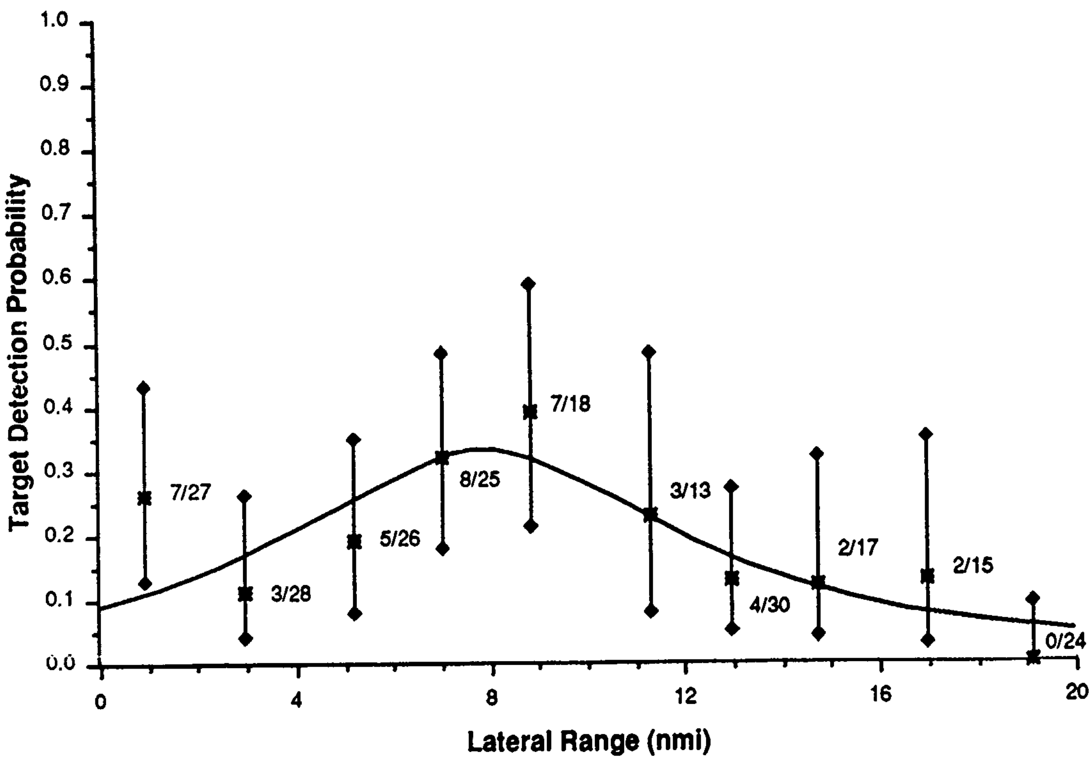

Figure 2-5. AN/APS-127 FLAR Detection of 23- to 30-Foot Boats
(20-nmi range scale; seas 2 to 3 feet)

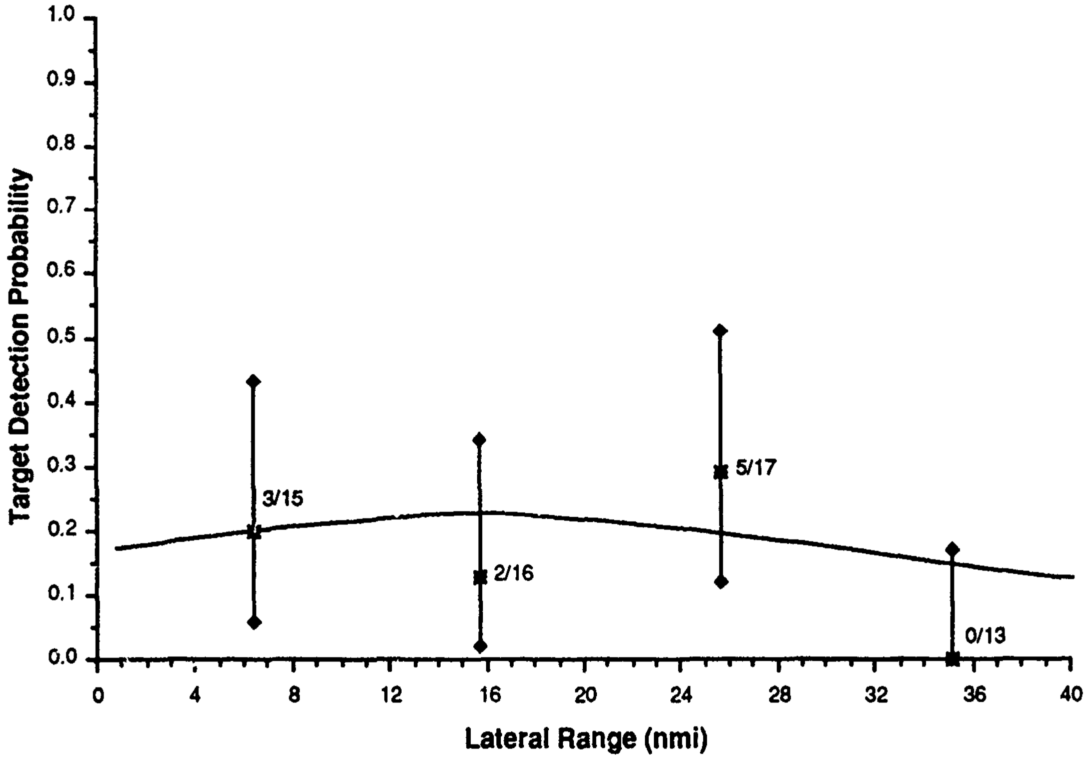

Figure 2-6. AN/APS-127 FLAR Detection of 23- to 30-Foot Boats
(40-nmi range scale; seas 2 to 3.5 feet)

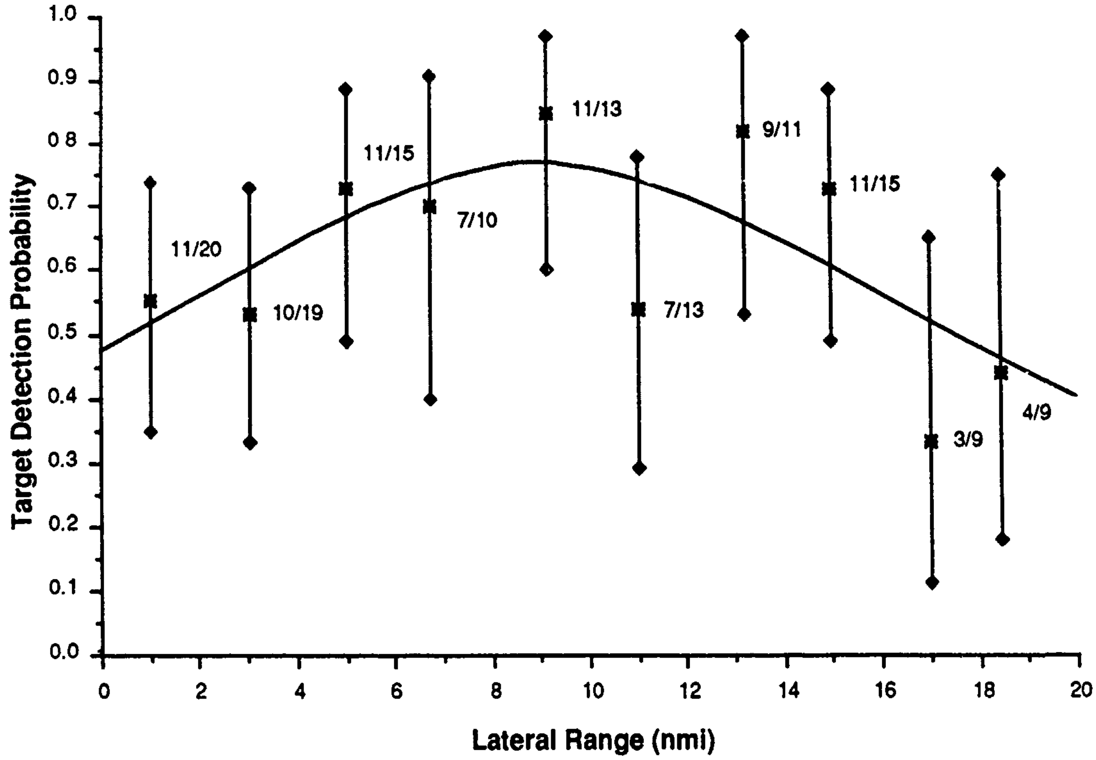

Figure 2-7. AN/APS-127 FLAR Detection of 32- to 42-Foot Boats
(20-nmi range scale; seas less than 2 feet)

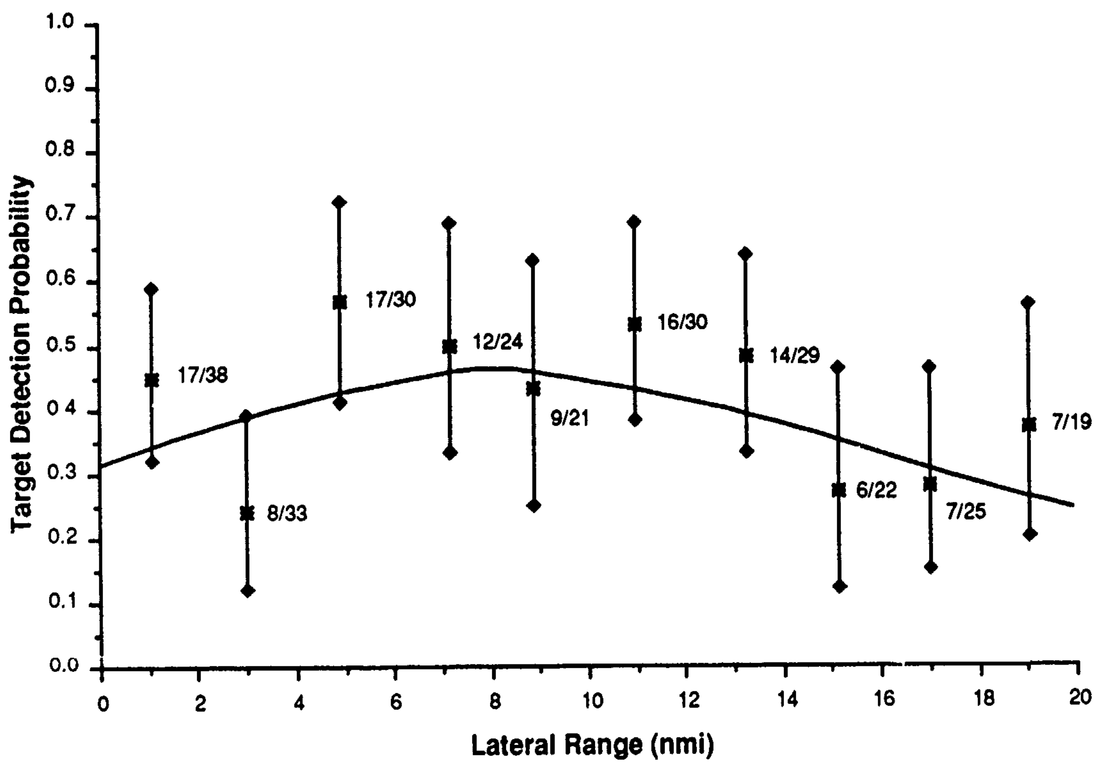

Figure 2-8. AN/APS-127 FLAR Detection of 32- to 42-Foot Boats
(20-nmi range scale; seas 2 to 3 feet)

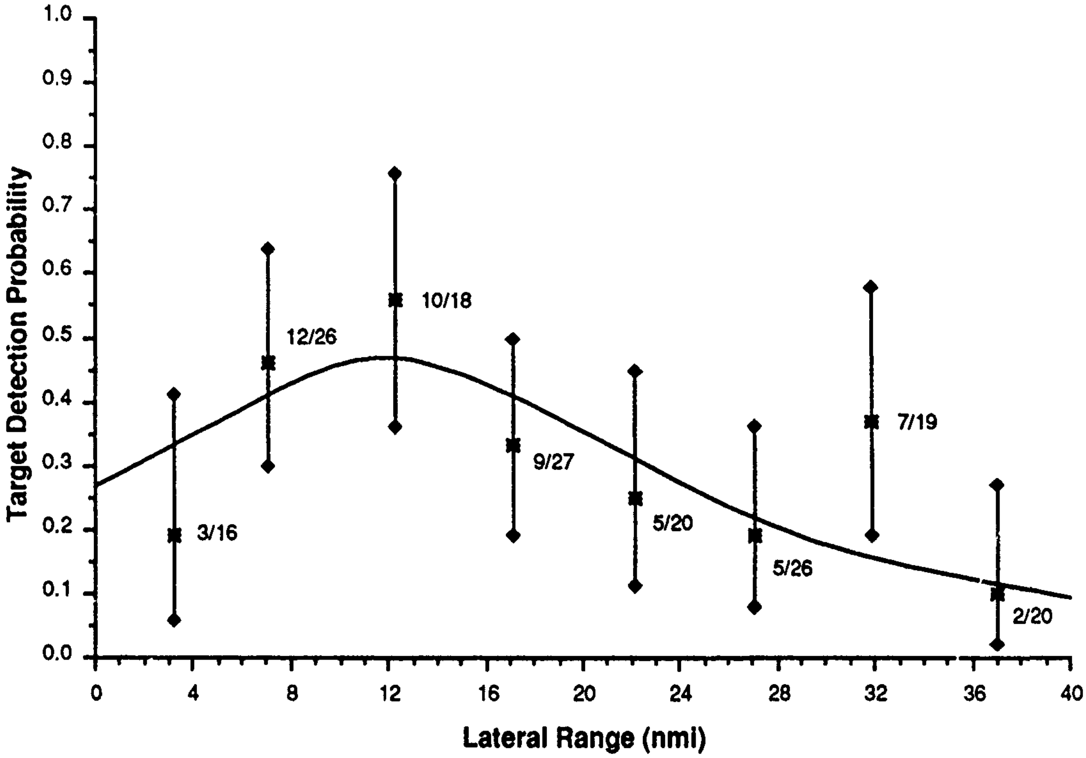

Figure 2-9. AN/APS-127 FLAR Detection of 32- to 42-Foot Boats
(40-nmi range scale; seas 2 to 3.5 feet)

2.2.2 AN/APS-131 SLAR Detection Performance

2.2.2.1 SLAR Detection of Life Rafts

Figures 2-10 and 2-11 depict the raw detection data and least-squares lateral range curve fits for SLAR (20-nmi range scale) detection of life rafts. Significant wave height was the only search variable in the life raft data set that was found during LOGODDS regression analysis to exert significant influence on target detection probability. Figure 2-10 provides the lateral range curve for significant wave heights less than 2 feet, and figure 2-11 provides the lateral range curve for significant wave heights of 2 to 4 feet. Inspection of figures 2-10 and 2-11 indicates that SLAR detection performance generally improves with increasing lateral range out to about 18 nmi then decreases slightly as the range scale limit is approached. Overall, the data depicted in figures 2-10 and 2-11 suggest that the SLAR is capable of detecting life rafts beyond the limits of the 20-nmi range scale. The presence or absence of LENSREF radar reflectors (used in an attempt to simulate the presence of survivors onboard the rafts) was not found to be significant. Use of the LENSREF radar reflectors was not intended to simulate a survival radar system

Figure 2-12 shows the target detection performance achieved by the SLAR against life raft targets in 1- to 3.5-foot seas. No data were collected using the SLAR (40-nmi range scale) in seas less than 1 foot. Figure 2-12 demonstrates that SLAR provides some life raft detection capability out to the 40-nmi range scale limit, with the best performance achieved between 12 and 24 nmi. When figure 2-12 is compared to figure 2-3, it is evident that the SLAR is slightly more capable of detecting life rafts than the FLAR over the entire 0- to 40-nmi lateral range interval.

2.2.2.2 SLAR Detection of Boats

Figures 2-13 through 2-17 depict the raw detection data and least-squares lateral range curves for SLAR detection of 23- to 42-foot boats. Significant wave height and target size were found to exert significant influence on target detection probability during LOGODDS regression analysis of the 20-nmi range scale data. Some indication that a 2500-foot search altitude is more effective than a 4000-foot search altitude was also found, (agreeing with previous SLAR research reported in reference 6 indicating that lower search altitude improves small target detection performance) but this result was not repeated consistently within the SLAR data set. Figures 2-13

and 2-14 provide lateral range curves for 23- to 30-foot targets. Figures 2-15 and 2-16 provide lateral range curves for 32- to 42-foot targets.

No significant search parameters were identified during analysis of the 40-nmi range scale SLAR data. This may be due to limited data quantities. Figure 2-17 presents a single lateral range curve for SLAR detection of 23- to 42-foot boats in seas from 1 to 3.5 feet.

Examination of figures 2-13 through 2-16 suggests that SLAR detection performance against small and medium boat targets was relatively consistent over the 0- to 20-nmi lateral range interval. Of the four lateral range curves, only figure 2-13 exhibits a pronounced peak, which may be attributable to the relatively small data set represented. Comparing the four data sets across target type and significant wave height levels indicated that SLAR detection performance degraded less dramatically than did FLAR detection performance when sea state increased and/or target size decreased.

Examination of figure 2-17 indicates that when the 40-nmi range scale was used, SLAR detection performance against boats remained fairly consistent at lateral ranges between 0 and 24 nmi then decreased gradually out to 40 nmi.

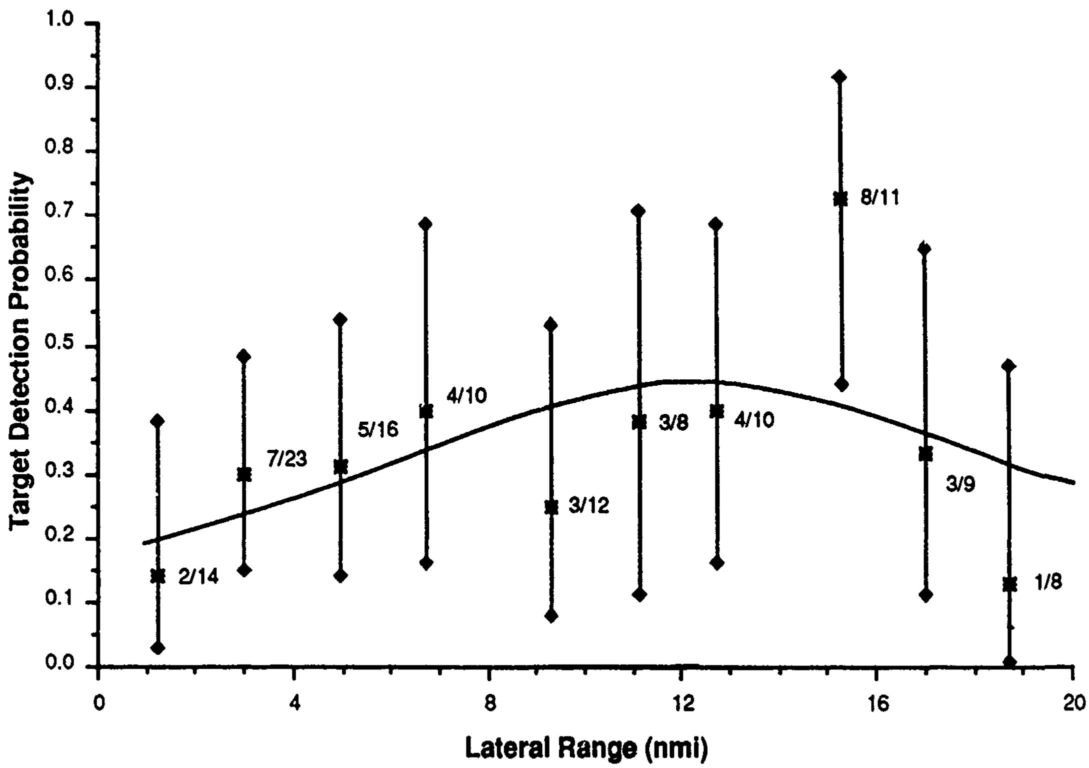

Figure 2-10. AN/APS-131 SLAR Detection of Life Rafts
(20-nmi range scale; seas less than 2 feet)

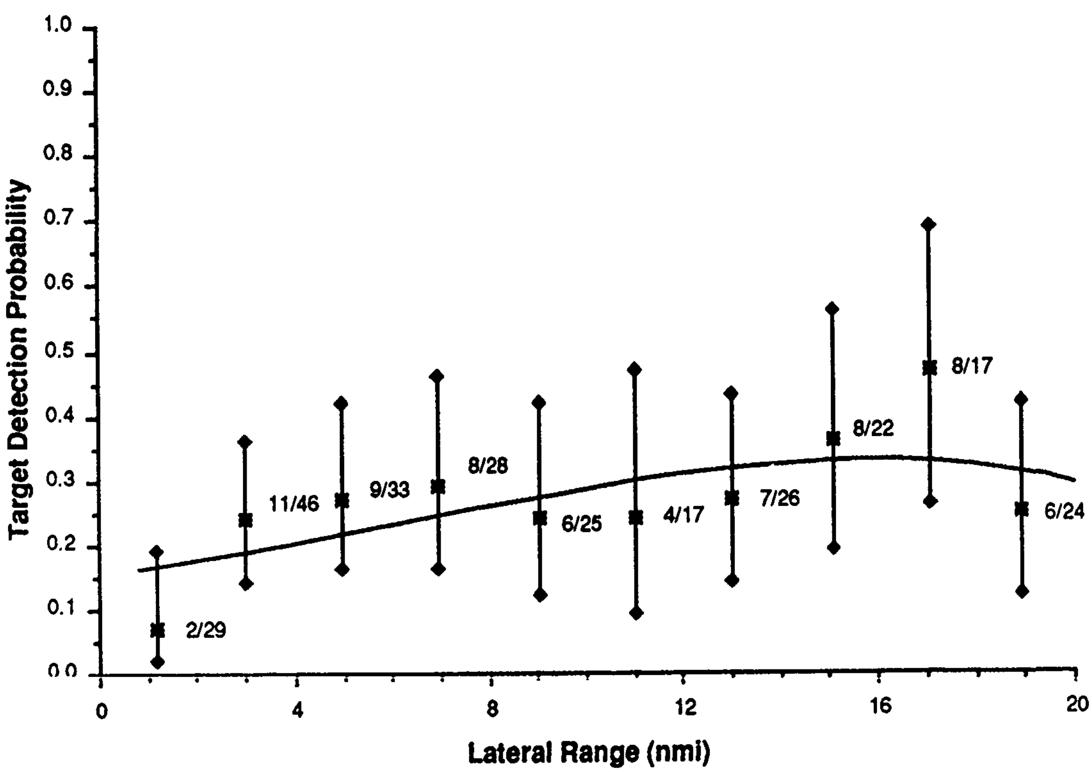

Figure 2-11. AN/APS-131 SLAR Detection of Life Rafts
(20-nmi range scale; seas 2 to 4 feet)

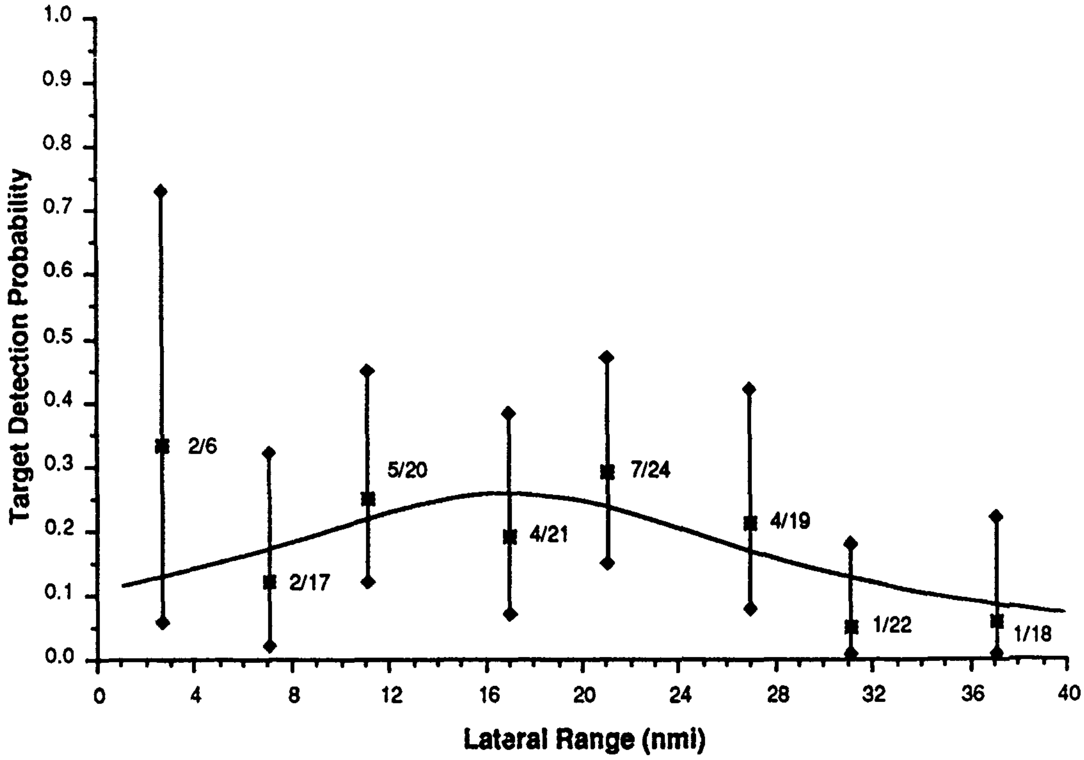

Figure 2-12. AN/APS-131 SLAR Detection of Life Rafts
(40-nmi range scale; seas 1 to 3.5 feet)

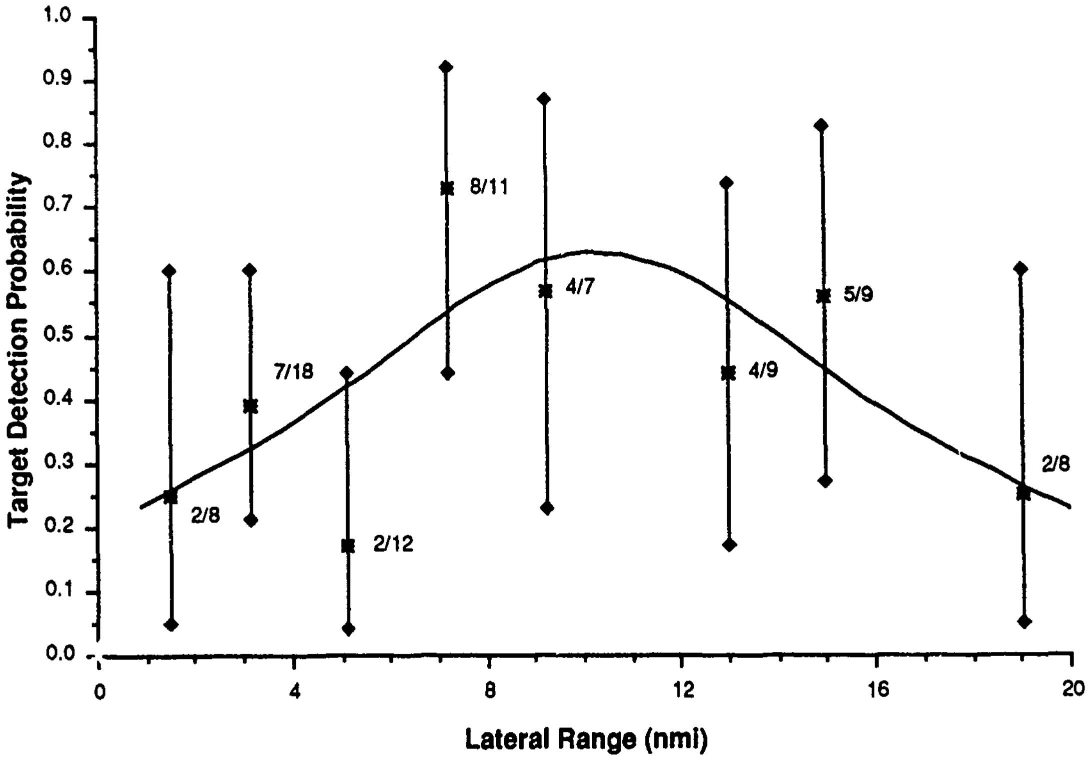

Figure 2-13. AN/APS-131 SLAR Detection of 23- to 30-Foot Boats
(20-nmi range scale; seas less than 2 feet)

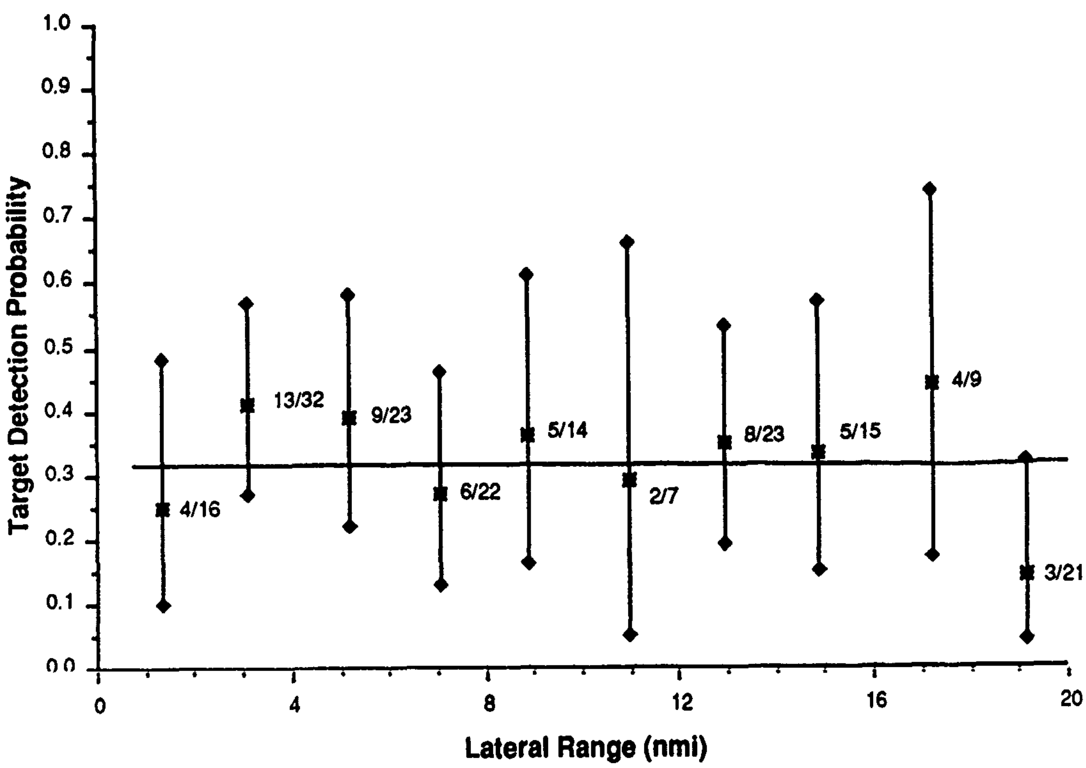

Figure 2-14. AN/APS-131 SLAR Detection of 23- to 30-Foot Boats
(20-nmi range scale; seas 2 to 3 feet)

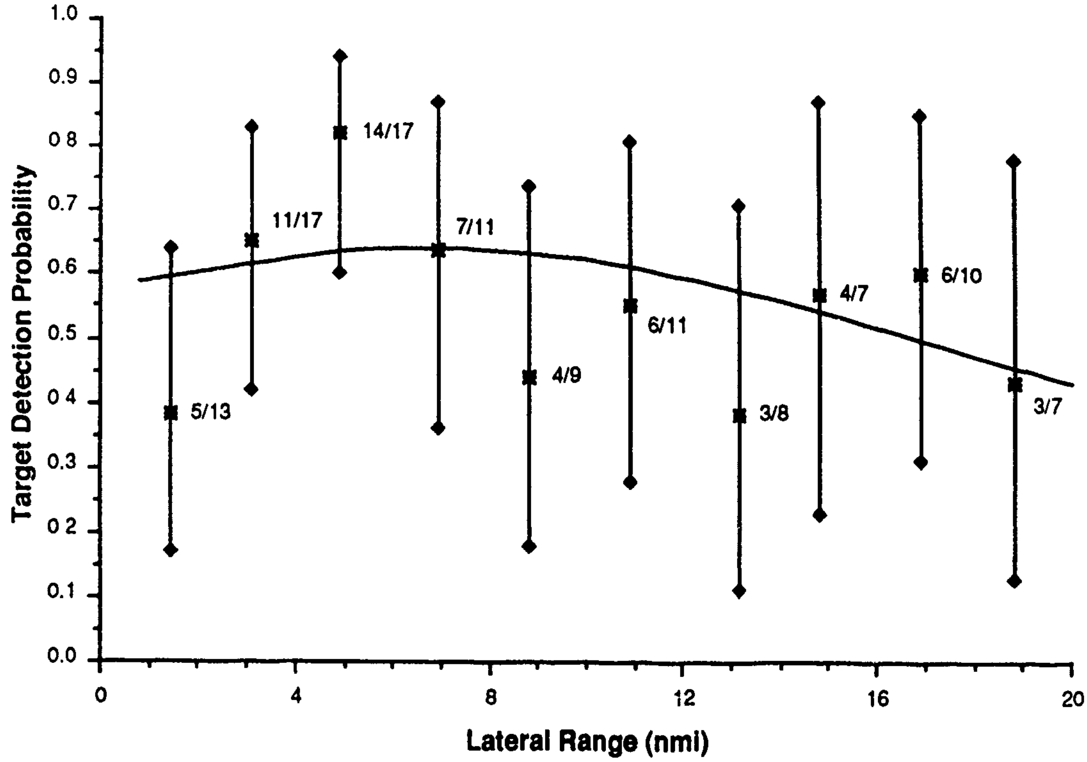

Figure 2-15. AN/APS-131 SLAR Detection of 32- to 42-Foot Boats
(20-nmi range scale; seas less than 2 feet)

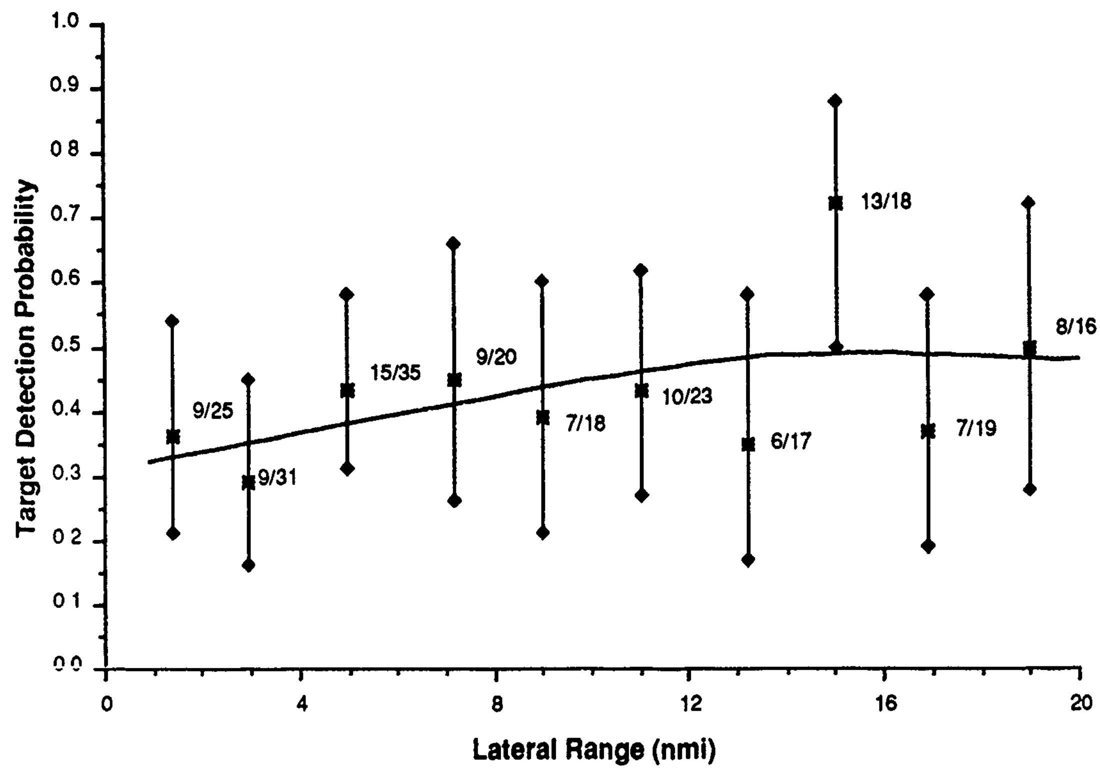

Figure 2-16. AN/APS-131 SLAR Detection of 32- to 42-Foot Boats
(20-nmi range scale; seas 2 to 3 feet)

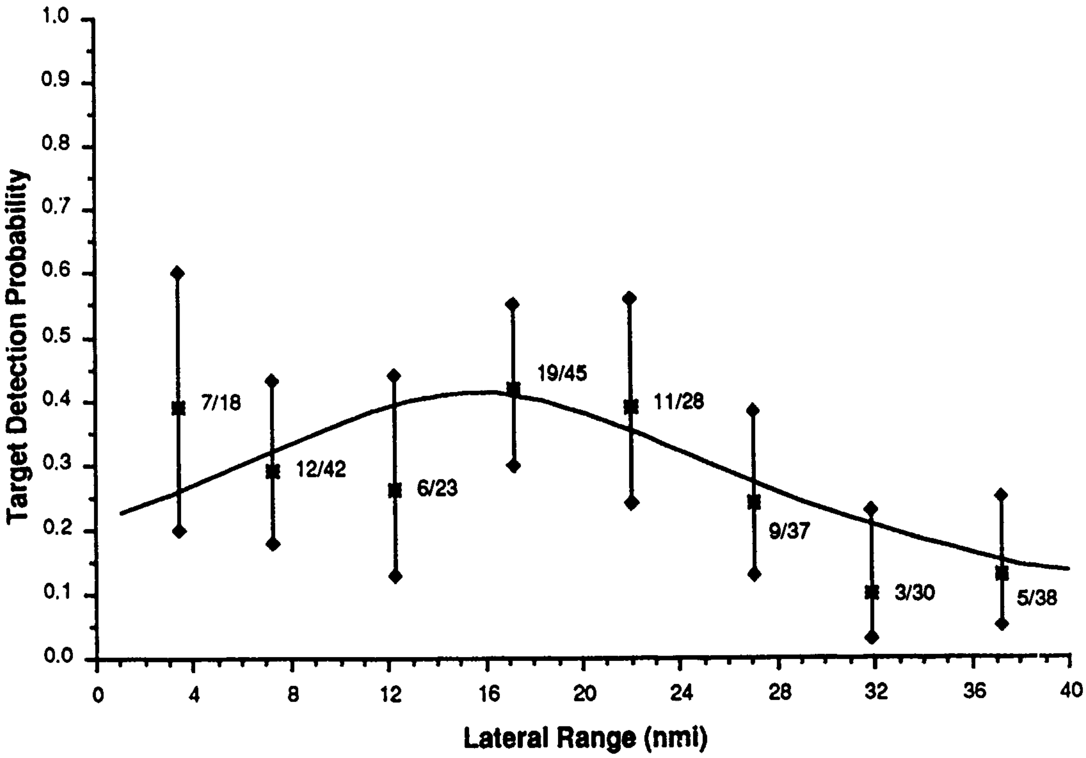

Figure 2-17. AN/APS-131 SLAR Detection of 23- to 42-Foot Boats
(40-nmi range scale; seas 1 to 3.5 feet)

2.2.3 Combined FLAR/SLAR Detection Performance

Analysis of the lateral range curves presented in figures 2-1 through 2-17 indicates that the 40-nmi range scales of both the AN/APS-127 FLAR and the AN/APS-131 SLAR provide the greatest overall capability to detect life rafts and small boats. Although some detection capability was lost inside 20 nmi by using the 40-nmi range scale, this loss was more than compensated for by the detection capability added by the increased area coverage between 20 and 40 nmi. This effect is quantitatively illustrated in the sweep width tables in chapter 3. To illustrate the combined FLAR/SLAR search effectiveness of the HU-25B against typical targets in an open-ocean situation, combined sensor lateral range curves were plotted assuming that both radars were operated on the 40-nmi range scale.

Using the method described in section 1.4.2.4 of this report, combined FLAR/SLAR lateral range curves were computed for the following cases: Life raft targets in 2- to 3.5-foot seas, 23- to 30-foot boat targets in 2- to 3.5-foot seas, and 32- to 42-foot boat targets in 2- to 3.5-foot seas. Combined sensor lateral range curves were not computed for seas less than 2 feet because almost no data were collected using the 40-nmi range scales under these conditions.

Figure 2-18 represents the combined FLAR/SLAR lateral range curve for life raft targets. The data presented in figures 2-3 and 2-12 were used to compute this curve. Because the individual FLAR and SLAR curves are similar in shape, the sensors supplement the detection capabilities of each other.

Figures 2-19 and 2-20 represent the combined FLAR/SLAR lateral range curves for 23- to 30-foot boat targets and 32- to 42-foot boat targets, respectively. The data in figures 2-6, 2-9, and 2-17 were used to compute these curves. As shown in figure 2-18, the sensors supplement each other's detection capabilities over the entire 40-nmi range scale.

Combined FLAR/SLAR sweep widths for both the 20- and 40-nmi range scales are provided in chapter 3.

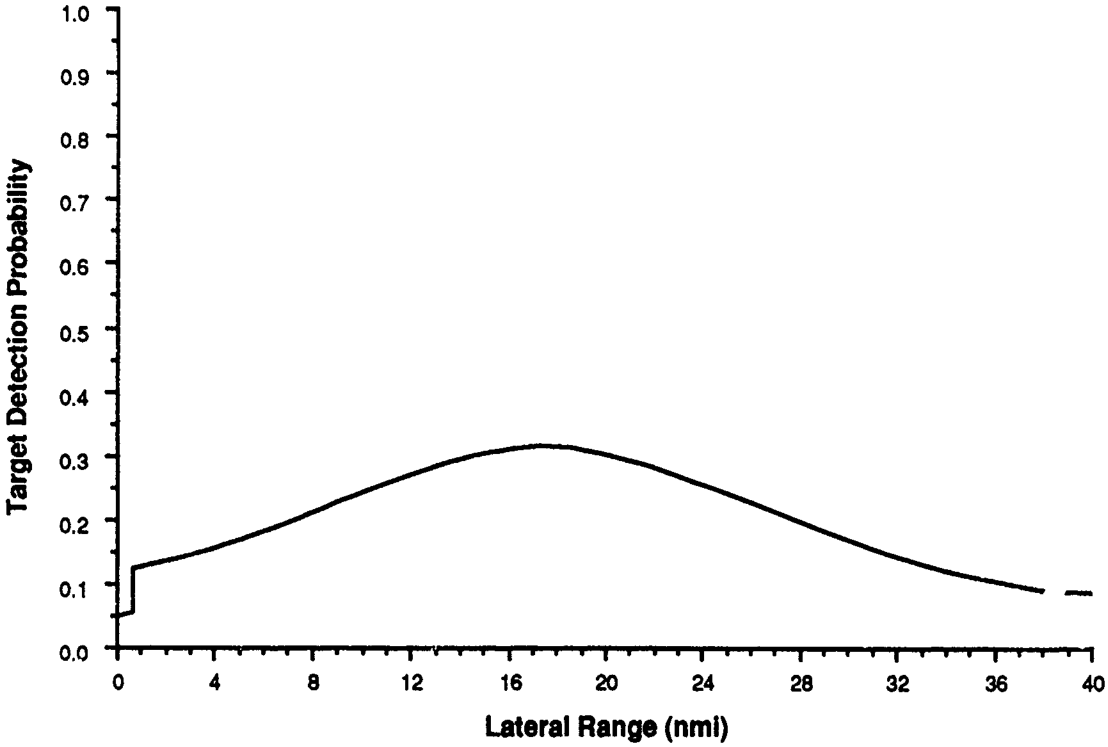

Figure 2-18. Combined FLAR/SLAR Detection of Life Rafts
(40-nmi range scale; seas 2 to 3.5 feet)

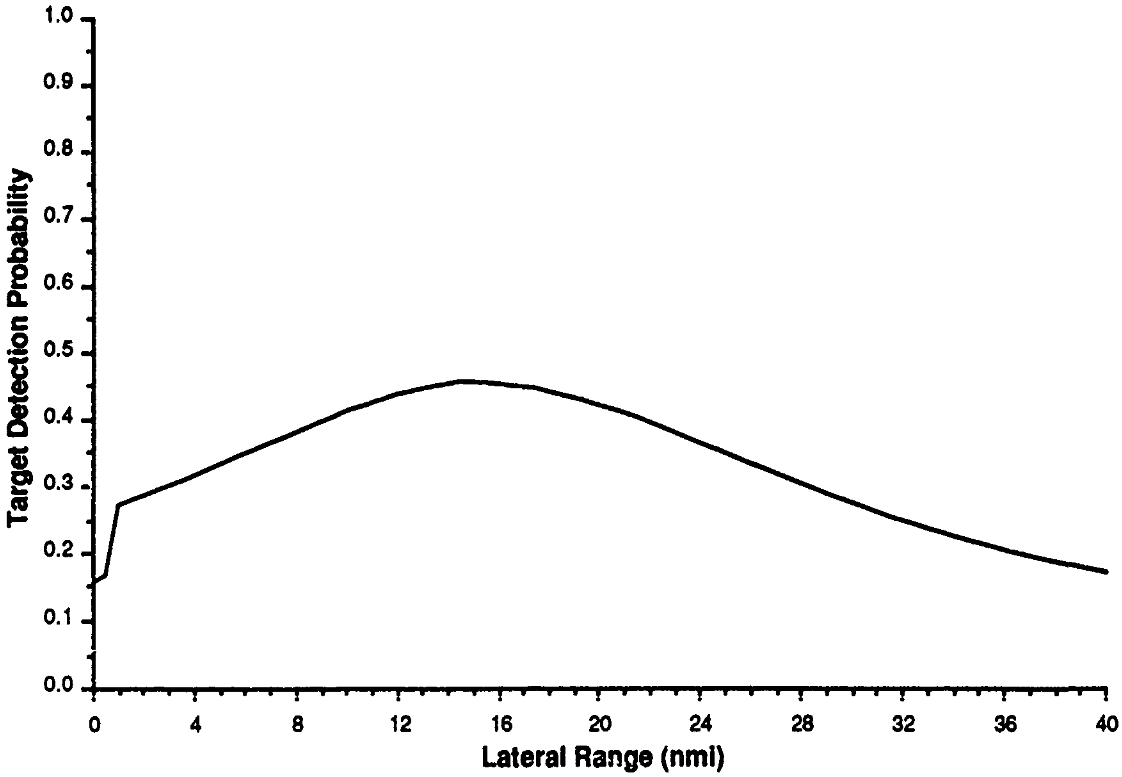

Figure 2-19. Combined FLAR/SLAR Detection of 23- to 30-Foot Boats
(40-nmi range scale; seas 2 to 3.5 feet)

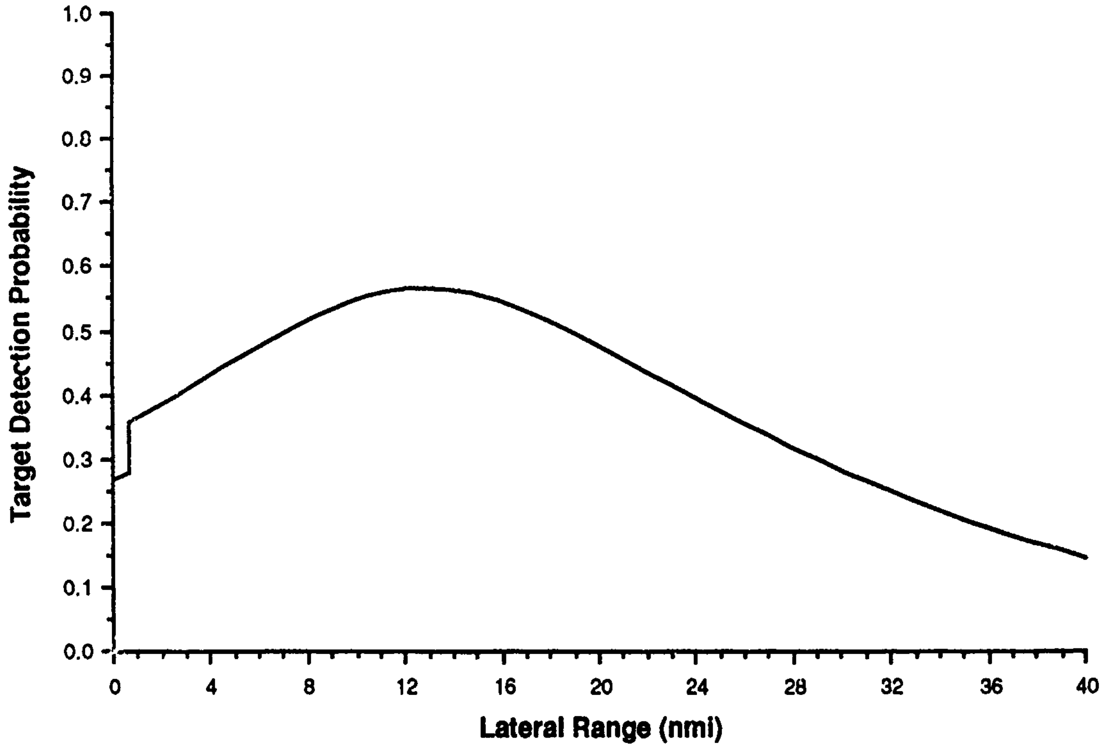

Figure 2-20. Combined FLAR/SLAR Detection of 32- to 42-Foot Boats
(40-nmi range scale; seas 2 to 3.5 feet)

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CHAPTER 3
CONCLUSIONS AND RECOMMENDATIONS

3.1 CONCLUSIONS

3.1.1 AN/APS-127 FLAR Detection Performance

Based on the data analyses presented in section 2.2.1, the following conclusions are drawn concerning AN/APS-127 FLAR detection performance:

1. While higher detection probabilities for a given lateral range bin were usually achieved using the 20-nmi range scale, use of the FLAR 40-nmi range scale may provide a more efficient target detection capability against both life rafts and 23- to 42-foot boats. This is due to the additional area coverage provided by the 40-nmi scale compensating for the slight drop in detection probability. This will be discussed further under general conclusions.

2. Target detection performance of the FLAR degrades substantially when significant wave heights increase from less than 2 feet to 2 to 3.5 feet. Detection performance during this test decreased about 60 percent against life raft targets, about 50 percent against small boats, and about 40 percent against medium boats.

3. Target detection probabilities achieved by the FLAR improve significantly with increases in target size. Medium boats (32 to 42 feet) are most detectable; small boats (23 to 30 feet) are somewhat less detectable than medium boats; and life rafts are the least detectable of the targets evaluated. This study did not identify a minimum detectable target size for the FLAR, nor was a threshold target size identified for which detection is almost certain when using either the 20- or 40-nmi range scales.

4. For sea states in the 9- to 10-foot range (Canadian Severe Weather Experiment) life rafts with LENSREF reflectors were not detectable by FLAR.

3.1.2 AN/APS-131 SLAR Detection Performance

Based on the data analyses presented in section 2.2.2, the following conclusions are drawn concerning AN/APS-131 SLAR detection performance:

1. While higher detection probabilities for a given lateral range interval were always achieved using the 20-nmi range scale, use of the 40-nmi range scale may provide a more efficient target detection capability against both life rafts and 23- to 42-foot boats. As with the FLAR, this is due to the additional area coverage provided by the use of the 40-nmi scale compensating for the drop in detection probability. Although no distinction was made relative to target size or significant wave height in the 40-nmi range scale data, the sweep widths computed for the 40-nmi range scale were about equal to those for the "best case" (lowest seas and/or largest targets) data sets gathered using the 20-nmi range scale.

2. Target detection performance of the SLAR 20-nmi range scale degrades substantially when significant wave heights increase from less than 2 feet to 2 to 3 feet. Detection performance during this test decreased about 21 percent against life raft targets, about 30 percent against small boats, and about 22 percent against medium boats. No degradation with sea state was identified for the SLAR 40-nmi range scale. This is more likely due to the limited range of significant wave heights represented (1 to 3.5 feet) than to any advantage the 40-nmi range scale may have over the 20-nmi range scale in rejecting sea clutter.

3. As with the FLAR, target detection probabilities achieved by the SLAR 20-nmi range scale improve significantly with target size. This study did not identify a significant difference in detectability between small and medium boats when the SLAR 40-nmi range scale was used. No minimum detectable target size was identified nor was a threshold target size identified for which detection by the SLAR is almost certain.

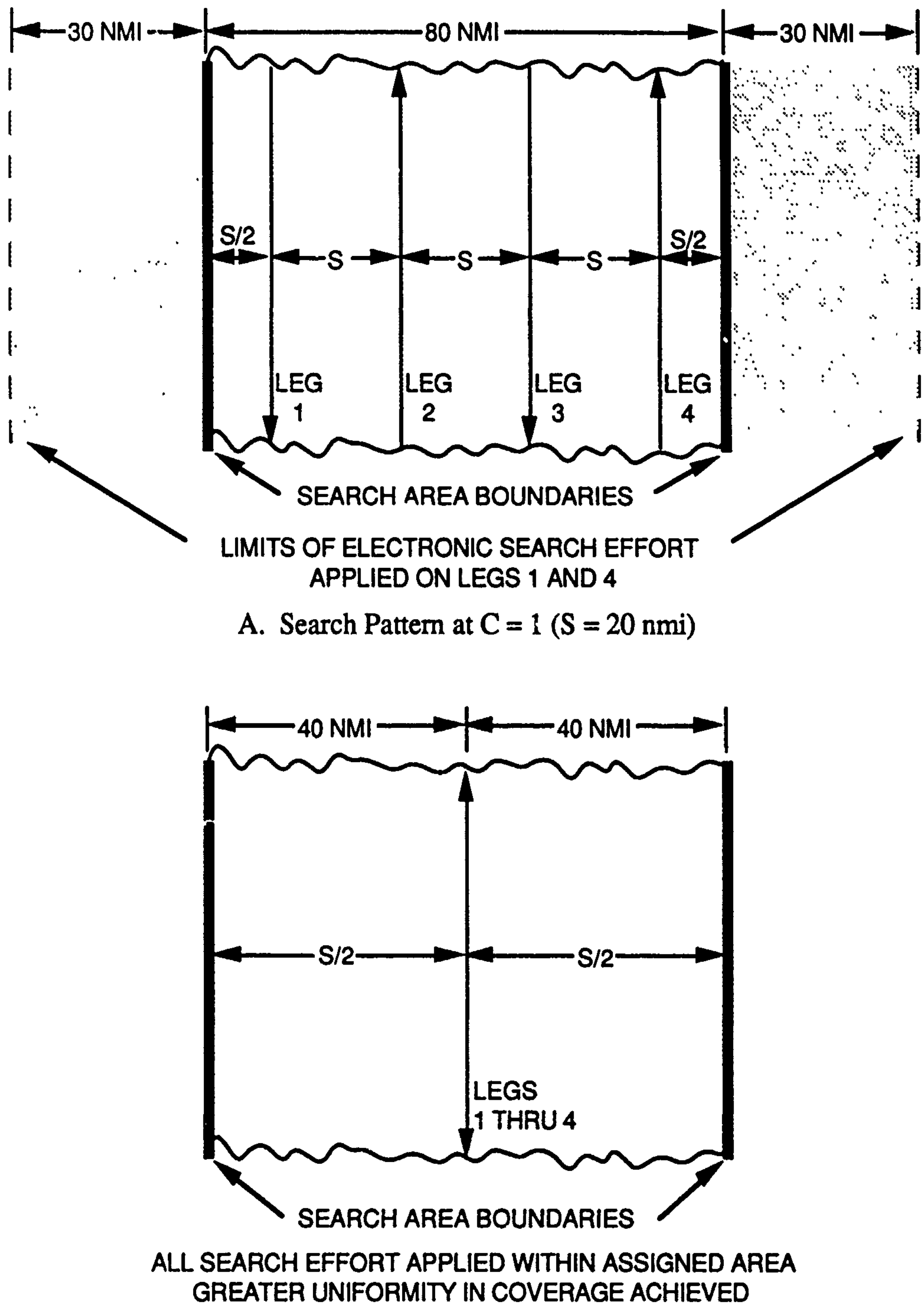
4. For sea states in the 9- to 10-foot range (Canadian Severe Weather Experiment) life rafts with LENSREF reflectors were not detectable by SLAR.

3.1.3 General Conclusions

The shape of the lateral range curves for both of the radars is quite different from the shape of lateral range curves for visual search (reference 7). For visual search, the target detection probability is at a maximum near zero lateral range and drops rapidly as lateral range increases beyond about half the sweep width distance. On the other hand, the lateral range curves for the radars are at a maximum detection probability nearer the mid-range of the range scale being used. A complex interaction among sensor-, environment-, and operator-related factors determines the shape of the radar lateral range curves presented in chapter 2.

Both the FLAR and SLAR sensors can be said to apply search effort at a target detection probability level that is generally less than 50 percent. This level of search effort is applied over large distances, however. Though most of the lateral range curves for both radar sensors tend to show a peak in probability near the middle of the range scale being used, the probability at all ranges is more uniform than that for visual search, i.e., no extremely sharp drop to near-zero probability occurs at a particular lateral range. The resultant sweep widths are generally one-fourth to one-half the range scale used on the sensor. While the tradi[illegible] l practice of assigning search patterns at a coverage factor (C) approaching 1 (where track spacing (S) equals sweep width (W)) provides a fairly uniform and intensive visual search effort throughout an assigned area, using this same practice in a FLAR or SLAR search appears to provide nonuniform coverage, and may not be the most efficient use of the available search effort. These circumstances present the search planner with a very different tactical problem than that associated with visual search.

Figure 3-1 illustrates this conclusion. Let us assume that the HU-25B is assigned an 80-nmi wide search area under conditions such that its electronic sweep width is 20 nmi when using the 40-nmi range scale. Figure 3-1A illustrates a portion of the search pattern that would be conducted if C = 1 were assigned. The shaded portions of figure 3-1A depict the search effort that would be applied outside the search area boundary on legs 1 and 4 of the search pattern assuming that the 40-nmi sensor range scale is used. These shaded zones of "wasted" search effort represent an area that is 75 percent as large as the assigned search area. Additional search effort is applied out to 10 nmi beyond both search area boundaries on legs 2 and 3 of the search pattern. Within



A. Search Pattern at C = 1 (S = 20 nmi)

B. Preferred Search Pattern at C = 0.25 (S = 80 nmi)

Figure 3-1. Alternate Strategies for Allocating HU-25 Electronic Search Effort (40-nmi radar range scale)

the search area, much greater probability of detection (POD) would be achieved near the area center than near its boundaries due to differences in the number of overlapping sensor passes completed.

This problem of applying search effort outside the assigned search area does not exist tc any great degree for visual search because the relationship of steeply falling target detection probability with lateral range leaves little residual detection capability beyond the one-half sweep width distance. Radars, on the other hand, appear to achieve a greater target detection probability beyond the one-half sweep width distance than within it, due to the maximum detection capability generally occurring at mid-range of the range scale used. In order to minimize search effort applied outside a given search area (and not "waste" detection capability), the flight track or search pattern for HU-25 radar searches should be altered from the "normal" coverage factor (C) mode. The modification should allow the detection capability of the radars to be concentrated within the assigned search area. For example, covering a search area 80 nmi wide could be achieved using the 40-nmi range scale on repeated passes along the same trackline (figure 3-1B). This tactic may be preferable to stepping the trackline by a distance equal to the sweep width. If SLAR search is conducted, a small offset (approximately 2 nmi) would compensate for the blind zone beneath the aircraft.

The technique described above concerns detection of targets, not identification or classification. This technique is designed to optimize radar detection performance. When considering implementation of this technique, the search planner would be required to allow enough on scene endurance for identification and classification of the targets detected. The National Search and Rescue Manual (reference 14) states that "generally, diversion [while on a track leg] will have no appreciable effect on area coverage as long as the SRU 'fixes' the location and time of departure from the search pattern and returns to the same point to resume search within a reasonable time." However, systematic logging of targets detected which subsequently require identification, <u>then</u> conducting the identification <u>after</u> completion of the pattern, will result in fewer diversions "re-identifying" the same target.

The issue of overall target detection probability for a search area as a function of coverage factor (C) has not been resolved for radar searches. The curves used in treference 14 are based on a particular shape of a lateral range curve (the inverse cube law of detection). which is representative of visual but not radar search processes. Therefore, we can make no quantitative assertions at this point on the relationship of overall coverage factor (C) to overall POD for radar searches. This is addressed as a topic for future research in section-3.2.5.

3.2 RECOMMENDATIONS

The following recommendations are made concerning HU-25 electronic search planning and tactics based on the results of this study and those reported in reference 4.

3.2.1 AN/APS-127 FLAR Searches

1. The sweep widths provided in table 3-1 should be used to represent AN/APS-127 FLAR search performance for all HU-25A and HU-25B aircraft.

2. All sweep widths in table 3-1 assume search altitudes between 2000 and 5000 feet. When target echoes are difficult to distinguish from sea return, AN/APS-127 searches should be conducted at the lowest altitude consistent with safety of flight operations i.e., 500 feet or an altitude that does not limit the radar horizon. As noted in reference 15, a maximum altitude of 500 feet is recommended for small targets (under 50 feet in length), while a higher altitude may suffice for larger targets. As reference 15 also notes, above 2000 feet, no additional radar coverage is gained because the radar horizon is greater than 50 nmi while the maximum range of the radar in the search mode is 40 nmi. Reference 4 documents that while using the 10-nmi range scale, a 500-foot search altitude instead of a 2500-foot search altitude may improve sweep width by up to 50 percent. A search altitude above 5000 feet is not recommended.

3. The AN/APS-127 operator should frequently reposition the sweep origin when searching in the preferred Ground Stabilized mode. This practice will maximize exposure time for targets that pass close aboard. If the sweep origin is allowed to get too close to the end of its "track" across the PPI display, the target will only appear briefly on the PPI display before it is "lost" in the sea return and fuselage "shadow" on the display.

4. a. The 40-nmi FLAR range scale should be used for small target searches in a large geographic area when target density is low.

   b. The 20-nmi or 10-nmi FLAR range scale should be used for small target searches when high target density is present, or when the width of the search area permits taking advantage of the higher target detection probabilities achieved using shorter range scales.

Table 3-1. Sweep Widths for AN/APS-127 FLAR

RANGE SCALE (nmi)	TARGET TYPES	SIGNIFICANT WAVE HEIGHTS REPRESENTED (feet)	SWEEP WIDTH (nmi)
10*	6- to 10-person life rafts	< 2	5.4
		2 to 3	1.8
	23- to 42-foot boats	< 2	8.5
		2 to 5	7.2
20	6- to 10-person life rafts	< 2	7.0
		2 to 3	2.8
	23- to 30-foot boats	< 2	14.1
		2 to 3	7.0
	32- to 42-foot boats	< 2	24.9
		2 to 3	15.3
40†	8- to 10-person life rafts	< 2	insufficient data
		2 to 3.5	9.0
	23- to 30-foot boats	< 2	insufficient data
		2 to 3.5	15.0
	32- to 42-foot boats	< 2	insufficient data
		2 to 3.5	23.7

*Based on 1987 data only.
†Based on 1988 data only.

3.2.2 AN/APS-131 SLAR Searches

1. The sweep widths provided in table 3-2 should be used to represent AN/APS-131 SLAR search performance for HU-25B aircraft.

2. All sweep widths in table 3-2 assume search altitudes between 2000 and 5000 feet. A search altitude above 5000 feet is not recommended for small targets. No evaluation of SLAR detection performance has been made at altitudes below 2000 feet.

Table 3-2. Sweep Widths for AN/APS-131 SLAR

RANGE SCALE (nmi)	TARGET TYPES	SIGNIFICANT WAVE HEIGHTS REPRESENTED (feet)	SWEEP WIDTH (nmi)
20*	4- to 10-person life rafts	< 2	13.4
		2 to 4	10.6
	23- to 30-foot boats	< 2	16.9
		2 to 3	11.9
	32- to 42-foot boats	< 2	21.5
		2 to 3	16.8
40*	8- to 10-person life rafts	1 to 3.5	13.3
	23- to 42-foot boats	1 to 3.5	21.4

*Based on 1988 data only.

3. a. The 40-nmi SLAR range scale should be used for small target searches in a large geographic area when target density is low.

b. The 20-nmi or 10-nmi SLAR range scale should be used for small target searches when high target density is present or when the width of the search area permits taking advantage of the higher detection probabilities achieved using the shorter range scales.

3.2.3 Combined FLAR/SLAR Searches

1. The sweep widths provided in table 3-3 should be used to represent the combined FLAR/SLAR search performance of HU-25B aircraft.

2. When both sensor operators are qualified on FLAR and SLAR, they should consider exchanging positions near the midpoint of a search sortie. This practice might serve to diminish the operator performance degradation experienced after approximately 1.5 hours time on task (reference 4).

3. When choosing whether to use the 40-nmi range scale or smaller range scales, guidance in sections 3.2.1.4 and 3.2.2.3 should be considered.

3.2.4 General Recommendations

1. Sufficient time should be provided before commencing search for electronic sensor operators to initialize and adjust their equipment. Collateral operator duties other than the search task should also be completed before commencing search. These tasks can usually be completed while en route to the search area, but extra lead time may be required when short transits are involved.

2. When conducting a visual search for small boat and life raft targets, concurrent radar searching should be conducted.

Table 3-3. Combined FLAR/SLAR Sweep Widths

RANGE SCALE (nmi)	TARGET TYPES	SIGNIFICANT WAVE HEIGHTS REPRESENTED (feet)	SWEEP WIDTH (nmi)
20	4- to 10-person life rafts	< 2	16.7
		2 to 3	11.7
	23- to 30-foot boats	< 2	21.0
		2 to 3	14.4
	32- to 42-foot boats	< 2	28.9
		2 to 3	21.8
40	8- to 10-person life rafts	2 to 3.5	17.0
	23- to 30-foot boats	2 to 3.5	26.7
	32- to 42-foot boats	2 to 3.5	31.2

3. Search planners should consider assigning 2 to 4 radar searches to the HU-25 at a large track spacing vice a single search with track spacing equal to sweep width. This practice will enable the aircraft to expend all of its search effort inside the search area boundaries and achieve a relatively uniform area coverage. A useful rule of thumb is to assign a track spacing equal to about twice the radar range scale.

4. Search planners should consider radar searches for small boat and life raft targets when effective visual search cannot be conducted.

5. Since the SLAR generally had higher detection probabilities than the FLAR in detectng life rafts (small, "soft" targets), the SLAR should be considered a useful tool when

searching for those particular types of targets. For example, use of the SLAR was quite effective in searching for debris from Space Shuttle Challenger.

3.2.5 Recommendation for Future Research

1. Computer simulation should be used to determine overall POD values achieved when multiple radar searches of an area at a low coverage factor (C) are conducted vice a single search at $C \geq 1$. The lateral range curves provided in chapter 2 of this report should be "driven" through a simulated search area at various coverage factors to formulate the POD versus C relationship for HU-25 radar search.

2. As was mentioned previously, while the traditional practice of assigning search patterns at a coverage factor (C) approaching 1 (where track spacing (S) equals sweep width (W)) provides a fairly uniform and intensive visual search effort throughout an assigned area, using this same practice in a FLAR or SLAR search appears to provide non-uniform coverage, and may not be the most efficient use of the search effort. Only through additional effort and computer simulation will the most effective electronic searching techniques be developed.

[BLANK]

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APPENDIX A
RAW DATA

This appendix contains raw data files for the AN/APS-127 FLAR and the AN/APS-131 SLAR in chronological order. This appendix includes only data collected in 1988. Data collected in 1987 is listed in appendix A of reference 4. The following is a key to the format of the raw data files.

<u>AN/APS-127 Forward Looking Airborne Radar (FLAR)</u>:

Column 1: Detection (1 = yes, 0 = no)
Column 2: Lateral Range (nmi)
Column 3: Time on Task (hours)
Column 4: Range Scale (nmi)
Column 5: Clutter Envelope Processor (CEP) (1 = on, 0 = off)
Column 6: Fast Time Constant (FTC) (1 = on, 0 = off)
Column 7: Stabilization (STAB) (1 = ground, 2 = heading, 3 = north)
Column 8: Wind Speed (knots)
Column 9: Significant Wave Height (feet)
Column 10: Altitude (feet)
Column 11: Search Speed (knots)
Column 12: Target Identification Number:

<u>Life Rafts</u>

4.50 = 4-person Beaufort w/reflector
6.50 = 6-person Beaufort w/reflector
8.10 = 8-person Givens w/o reflector
8.50 = 8-person Givens w/reflector
10.10 = 10-person Goodrich w/o reflector
10.20 = 10-person Switlik w/o reflector
10.50 = 10-person Goodrich w/reflector
10.60 = 10-person Switlik w/reflector

<u>Boats</u>

23.10 = Bears Kat
25.10 = Little Angel
25.20 = Sea Trek
28.10 = Ho-Hum
29.10 = Caprice
30.10 = Chalet
30.20 = Top Secret
32.10 = Gremlin
34.10 = Burster II
34.20 = Chatelaine
34.30 = My Last Toy?

Boats (Cont'd)

37.10 = Serenity

38.10 = 3-J's

42.10 = Geo. A. Follini

42.50 = CG 42048

43.10 = Spindrift

AN/APS-131 Side Looking Airborne Radar (SLAR):

Column 1: Detection (1 = yes, 0 = no)

Column 2: Lateral Range (nmi)

Column 3: Time on Task (hours)

Column 4: Range Scale (nmi)

Column 5: Wind Speed (knots)

Column 6: Significant Wave Height (feet)

Column 7: Altitude (feet)

Column 8: Search Speed (knots)

Column 9: Target Identification Number:

Life Rafts

4.50 = 4-person Beaufort w/reflector

6.50 = 6-person Beaufort w/reflector

8.10 = 8-person Givens w/o reflector

8.50 = 8-person Givens w/reflector

10.10 = 10-person Goodrich w/o reflector

10.20 = 10-person Switlik w/o reflector

10.50 = 10-person Goodrich w/reflector

10.60 = 10-person Switlik w/reflector

Boats

23.10 = Bears Kat

25.10 = Little Angel

25.20 = Sea Trek

28.10 = Ho-Hum

29.10 = Caprice

30.10 = Chalet

30.20 = Top Secret

32.10 = Gremlin

34.10 = Burster II

34.20 = Chatelaine

34.30 = My Last Toy?

37.10 = Serenity

38.10 = 3-J's

42.10 = Geo. A. Follini

42.50 = CG 42048

43.10 = Spindrift

CG7101 03 OCT 88 FLAR

1	2.80	0.00	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	30.20
1	3.00	0.00	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	37.10
1	1.70	0.10	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	10.50
1	4.70	0.10	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	8.10
1	8.70	0.10	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	42.50
0	0.20	0.10	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	42.10
0	5.10	0.10	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	23.10
0	3.60	0.10	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	30.10
0	2.40	0.10	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	10.60
0	0.20	0.10	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	10.10
1	6.00	0.20	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	42.10
1	0.90	0.20	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	23.10
1	3.00	0.20	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	37.10
1	3.40	0.20	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	10.60
1	3.00	0.20	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	30.20
0	2.30	0.20	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	30.10
0	2.70	0.20	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	42.50
0	4.10	0.20	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	10.50
0	1.20	0.20	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	8.10
1	6.00	0.20	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	10.10
0	9.40	0.50	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	10.60
1	6.80	0.40	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	23.10
1	3.30	0.40	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	42.50
1	11.80	0.50	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	42.10
0	8.30	0.50	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	30.10
1	9.00	0.40	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	37.10
0	9.10	0.50	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	30.20
0	10.10	0.50	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	10.50
0	7.20	0.50	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	8.10
0	12.10	0.50	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	10.10
1	17.50	0.60	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	42.10
1	15.00	0.60	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	30.20
0	13.00	0.70	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	23.10
0	14.30	0.60	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	30.10
0	15.10	0.70	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	37.10
0	9.40	0.60	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	42.50
0	15.40	0.70	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	10.60
0	16.10	0.70	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	10.50
0	13.10	0.70	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	8.10
0	17.90	0.60	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	10.10
0	15.50	0.90	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	42.50
0	19.10	0.90	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	8.10
0	19.10	0.90	20.00	0.00	0.00	1.00	7.50	1.00	4000.00	227.00	23.10
1	15.70	0.90	20.00	0.00	0.00	1.00	8.10	1.00	4000.00	255.00	42.50
1	19.30	0.90	20.00	0.00	0.00	1.00	8.10	1.00	4000.00	255.00	23.10
0	19.20	0.90	20.00	0.00	0.00	1.00	8.10	1.00	4000.00	255.00	8.10
1	15.50	1.10	20.00	0.00	0.00	1.00	8.10	1.00	4000.00	255.00	37.10
0	16.20	1.10	20.00	0.00	0.00	1.00	8.10	1.00	4000.00	255.00	10.50
1	9.90	1.10	20.00	0.00	0.00	1.00	8.10	1.00	4000.00	255.00	42.50
0	17.30	1.20	20.00	0.00	0.00	1.00	8.10	1.00	4000.00	255.00	42.10
0	13.30	1.20	20.00	0.00	0.00	1.00	8.10	1.00	4000.00	255.00	23.10
0	14.40	1.20	20.00	0.00	0.00	1.00	8.10	1.00	4000.00	255.00	30.10
0	15.50	1.10	20.00	0.00	0.00	1.00	8.10	1.00	4000.00	255.00	30.20
0	15.40	1.10	20.00	0.00	0.00	1.00	8.10	1.00	4000.00	255.00	10.60
0	13.10	1.10	20.00	0.00	0.00	1.00	8.10	1.00	4000.00	255.00	8.10
0	18.00	1.20	20.00	0.00	0.00	1.00	8.10	1.00	4000.00	255.00	10.10
1	11.30	1.30	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	255.00	42.10
1	9.70	1.30	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	255.00	37.10
1	9.70	1.30	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	255.00	30.20
0	7.30	1.30	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	255.00	23.10
0	8.50	1.30	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	255.00	30.10
0	9.50	1.30	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	255.00	10.60

0	10.20	1.30	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	255.00	10.50
0	7.20	1.30	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	255.00	8.10
0	12.10	1.30	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	255.00	10.10
0	4.20	1.30	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	255.00	42.50
1	3.80	1.50	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	37.10
1	3.80	1.50	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	30.20
1	1.70	1.50	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	42.50
1	5.20	1.50	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	42.10
0	1.30	1.60	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	23.10
0	2.60	1.60	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	30.10
0	3.50	1.50	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	10.60
0	4.20	1.60	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	10.50
0	1.20	1.60	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	8.10
0	6.00	1.60	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	10.10
1	0.80	1.70	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	42.10
1	7.30	1.70	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	42.50
1	3.30	1.70	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	30.10
1	4.70	1.70	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	23.10
1	1.90	1.70	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	37.10
0	2.10	1.80	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	30.20
0	2.50	1.80	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	10.60
0	1.80	1.70	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	10.50
0	4.80	1.70	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	8.10
0	0.10	1.70	20.00	0.00	0.00	1.00	6.30	1.00	4000.00	228.00	10.10

CG2101 05 OCT 88 FLAR

1	1.00	0.00	20.00	1.00	0.00	1.00	19.00	2.00	2500.00	233.00	42.10
0	5.30	0.00	20.00	1.00	0.00	1.00	19.00	2.00	2500.00	233.00	23.10
0	3.90	0.10	20.00	1.00	0.00	1.00	19.00	2.00	2500.00	233.00	30.10
0	6.90	0.00	20.00	1.00	0.00	1.00	19.00	2.00	2500.00	233.00	37.10
0	2.70	0.10	20.00	1.00	0.00	1.00	19.00	2.00	2500.00	233.00	42.50
0	0.90	0.10	20.00	1.00	0.00	1.00	19.00	2.00	2500.00	233.00	10.50
0	2.70	0.10	20.00	1.00	0.00	1.00	19.00	2.00	2500.00	233.00	8.10
0	4.70	0.00	20.00	1.00	0.00	1.00	19.00	2.00	2500.00	233.00	10.10
0	2.00	0.00	20.00	1.00	0.00	1.00	19.00	2.00	2500.00	233.00	10.60
0	6.70	0.20	20.00	0.00	0.00	1.00	19.00	2.00	2500.00	201.00	42.10
0	9.70	0.20	20.00	1.00	0.00	1.00	19.00	2.00	2500.00	201.00	23.10
0	2.10	0.20	20.00	1.00	0.00	1.00	19.00	2.00	2500.00	201.00	30.10
0	1.10	0.20	20.00	0.00	0.00	1.00	19.00	2.00	2500.00	201.00	37.10
0	3.10	0.20	20.00	0.00	0.00	1.00	19.00	2.00	2500.00	201.00	42.50
0	5.00	0.20	20.00	0.00	0.00	1.00	19.00	2.00	2500.00	201.00	[illegible]
0	3.10	0.20	20.00	0.00	0.00	1.00	19.00	2.00	2500.00	201.00	8.10
0	1.30	0.20	20.00	1.00	0.00	1.00	19.00	2.00	2500.00	201.00	10.10
0	3.90	0.20	20.00	1.00	0.00	1.00	19.00	2.00	2500.00	201.00	10.60
1	12.50	0.40	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	233.00	42.10
1	5.20	0.50	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	233.00	37.10
0	6.80	0.50	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	233.00	23.10
0	8.10	0.50	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	233.00	30.10
0	9.20	0.50	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	233.00	42.50
0	11.00	0.50	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	233.00	10.50
0	9.20	0.50	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	233.00	8.10
0	7.30	0.50	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	233.00	10.10
0	9.90	0.50	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	233.00	10.60
0	18.40	0.70	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	201.00	42.10
0	13.00	0.70	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	201.00	23.10
0	14.10	0.60	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	201.00	30.10
0	10.80	0.70	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	201.00	37.10
0	15.20	0.70	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	201.00	42.50
0	17.00	0.70	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	201.00	10.50
0	15.10	0.70	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	201.00	8.10
0	13.10	0.70	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	201.00	10.10
0	15.80	0.70	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	201.00	10.60
0	19.50	0.80	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	233.00	23.10
0	17.60	0.80	20.00	1.00	0.00	1.00	16.00	2.00	2500.00	233.00	37.10
1	5.20	0.00	20.00	0.00	0.00	1.00	2.00	1.00	5000.00	218.00	30.20
1	2.90	0.00	20.00	0.00	0.00	1.00	2.00	1.00	5000.00	218.00	8.10
1	6.70	0.00	20.00	0.00	0.00	1.00	2.00	1.00	5000.00	218.00	37.10
0	5.10	0.00	20.00	0.00	0.00	1.00	2.00	1.00	5000.00	218.00	23.10
0	0.80	0.00	20.00	0.00	0.00	1.00	2.00	1.00	5000.00	218.00	42.10
0	0.90	0.00	20.00	0.00	0.00	1.00	2.00	1.00	5000.00	218.00	10.50
0	2.10	0.00	20.00	0.00	0.00	1.00	2.00	1.00	5000.00	218.00	10.60
0	4.70	0.00	20.00	0.00	0.00	1.00	2.00	1.00	5000.00	218.00	10.10
0	3.80	0.00	20.00	0.00	0.00	1.00	2.00	1.00	5000.00	218.00	30.10
0	3.00	0.00	20.00	0.00	0.00	1.00	2.00	1.00	5000.00	218.00	42.50
1	3.80	0.20	20.00	0.00	0.00	1.00	2.00	1.00	5000.00	218.00	10.60
1	0.50	0.20	20.00	0.00	0.00	1.00	2.00	1.00	5000.00	240.00	30.20
1	6.60	0.20	20.00	0.00	0.00	1.00	2.00	1.00	5000.00	240.00	42.10
0	0.70	0.20	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	240.00	23.10
0	1.20	0.20	20.00	0.00	0.00	1.00	2.00	1.00	5000.00	240.00	10.10
0	0.70	0.20	20.00	0.00	0.00	1.00	2.00	1.00	5000.00	240.00	37.10
0	3.20	0.20	20.00	0.00	0.00	1.00	2.00	1.00	5000.00	240.00	8.10
0	4.90	0.20	20.00	0.00	0.00	1.00	2.00	1.00	5000.00	240.00	10.50
0	2.70	0.20	20.00	0.00	0.00	1.00	2.00	1.00	5000.00	240.00	42.50
0	2.10	0.20	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	240.00	30.10
1	5.10	0.40	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	220.00	37.10
1	8.60	0.40	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	220.00	42.50
0	9.80	0.40	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	220.00	10.60
0	6.40	0.40	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	220.00	30.20

0	6.70	0.40	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	220.00	23.10
0	7.20	0.40	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	220.00	10.10
0	12.30	0.40	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	220.00	42.10
0	10.90	0.40	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	220.00	10.50
0	9.00	0.40	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	220.00	8.10
0	7.90	0.40	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	220.00	30.10
1	13.90	0.50	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	246.00	30.10
1	14.60	0.50	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	246.00	42.50
1	15.80	0.50	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	246.00	10.60
0	15.10	0.60	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	246.00	8.10
0	16.90	0.60	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	246.00	10.50
0	11.20	0.60	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	246.00	37.10
0	18.30	0.60	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	246.00	42.10
0	12.60	0.60	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	246.00	23.10
0	13.10	0.60	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	246.00	10.10
0	12.30	0.60	20.00	0.00	0.00	1.00	2.40	1.00	5000.00	246.00	30.20
0	18.20	0.80	20.00	0.00	0.00	1.00	8.50	1.00	5000.00	218.00	30.20
0	18.70	0.80	20.00	0.00	0.00	1.00	8.50	1.00	5000.00	218.00	23.10
0	19.20	0.80	20.00	0.00	0.00	1.00	8.50	1.00	5000.00	218.00	10.10
1	17.20	0.80	20.00	0.00	0.00	1.00	8.50	1.00	5000.00	218.00	37.10
0	19.90	0.90	20.00	0.00	0.00	1.00	8.50	1.00	5000.00	218.00	30.10
0	19.20	0.90	20.00	0.00	0.00	1.00	11.00	1.00	4000.00	242.00	10.10
0	17.10	0.90	20.00	0.00	0.00	1.00	11.00	1.00	4000.00	242.00	37.10
1	18.80	0.90	20.00	0.00	0.00	1.00	11.00	1.00	4000.00	242.00	23.10
0	18.00	0.90	20.00	0.00	0.00	1.00	11.00	1.00	4000.00	242.00	30.20
0	12.00	1.10	20.00	0.00	0.00	1.00	11.00	1.00	4300.00	225.00	30.20
1	15.20	1.10	20.00	0.00	0.00	1.00	11.00	1.00	4300.00	225.00	42.50
0	18.30	1.10	20.00	0.00	0.00	1.00	11.00	1.00	4300.00	225.00	42.10
0	13.10	1.10	20.00	0.00	0.00	1.00	11.00	1.00	4300.00	225.00	23.10
0	14.10	1.10	20.00	0.00	0.00	1.00	11.00	1.00	4300.00	225.00	30.10
0	11.20	1.10	20.00	0.00	0.00	1.00	11.00	1.00	4300.00	225.00	37.10
0	17.00	1.10	20.00	0.00	0.00	1.00	11.00	1.00	4300.00	225.00	[illegible]
0	15.10	1.10	20.00	0.00	0.00	1.00	11.00	1.00	4300.00	225.00	8.10
0	13.20	1.10	20.00	0.00	0.00	1.00	11.00	1.00	4300.00	225.00	10.10
0	15.80	1.10	20.00	0.00	0.00	1.00	11.00	1.00	4300.00	225.00	10.60
1	5.90	1.30	20.00	0.00	0.00	1.00	11.00	1.00	4300.00	225.00	30.20
0	9.10	1.30	20.00	0.00	0.00	1.00	10.00	1.00	4300.00	225.00	42.50
1	12.30	1.30	20.00	0.00	0.00	1.00	10.00	1.00	4500.00	247.00	42.10
1	7.20	1.30	20.00	0.00	0.00	1.00	10.00	1.00	4500.00	247.00	10.10
0	7.20	1.30	20.00	0.00	0.00	1.00	10.00	1.00	4500.00	247.00	23.10
0	8.10	1.30	20.00	0.00	0.00	1.00	10.00	1.00	4500.00	247.00	30.10
0	5.30	1.30	20.00	0.00	0.00	1.00	10.00	1.00	4500.00	247.00	37.10
0	11.00	1.30	20.00	0.00	0.00	1.00	10.00	1.00	4500.00	247.00	10.50
0	9.10	1.30	20.00	0.00	0.00	1.00	10.00	1.00	4500.00	247.00	8.10
0	9.90	1.30	20.00	0.00	0.00	1.00	10.00	1.00	4500.00	247.00	10.60
1	5.00	1.50	20.00	0.00	0.00	1.00	10.00	1.00	5700.00	221.00	10.50
1	3.10	1.50	20.00	0.00	0.00	1.00	10.00	1.00	5700.00	221.00	42.50
1	6.40	1.50	20.00	0.00	0.00	1.00	10.00	1.00	5700.00	221.00	42.10
0	1.20	1.60	20.00	0.00	0.00	1.00	10.00	1.00	5700.00	221.00	23.10
0	2.10	1.60	20.00	0.00	0.00	1.00	10.00	1.00	5700.00	221.00	30.10
0	0.40	1.50	20.00	0.00	0.00	1.00	10.00	1.00	5700.00	221.00	37.10
0	0.10	1.50	20.00	0.00	0.00	1.00	10.00	1.00	5700.00	221.00	30.20
0	3.10	1.60	20.00	0.00	0.00	1.00	10.00	1.00	4000.00	241.00	8.10
0	1.20	1.60	20.00	0.00	0.00	1.00	10.00	1.00	4000.00	241.00	10.10
1	3.80	1.50	20.00	0.00	0.00	1.00	10.00	1.00	4000.00	241.00	10.60
1	2.20	1.70	20.00	0.00	0.00	1.00	10.00	1.00	4000.00	241.00	8.10
1	1.00	1.70	20.00	0.00	0.00	1.00	10.00	1.00	4000.00	241.00	42.10
0	3.80	1.70	20.00	0.00	0.00	1.00	10.00	1.00	4000.00	241.00	23.10
0	3.50	1.70	20.00	0.00	0.00	1.00	10.00	1.00	4000.00	241.00	30.10
0	5.70	1.70	20.00	0.00	0.00	1.00	10.00	1.00	4000.00	241.00	37.10
0	5.10	1.70	20.00	0.00	0.00	1.00	10.00	1.00	4000.00	241.00	30.20
0	2.10	1.70	20.00	0.00	0.00	1.00	10.00	1.00	4000.00	241.00	42.50
0	0.20	1.70	20.00	0.00	0.00	1.00	10.00	1.00	4000.00	241.00	10.50

0	3.80	1.70	20.00	0.00	0.00	1.00	10.00	1.00	4000.00	241.00	10.10
0	1.10	1.70	20.00	0.00	0.00	1.00	10.00	1.00	4000.00	241.00	10.60

CG2101 07 OCT 88 FLAR

1	1.40	0.10	20.00	0.00	0.00	1.00	14.00	2.00	2500.00	232.00	43.10
1	5.20	0.10	20.00	0.00	0.00	1.00	14.00	2.00	2500.00	232.00	23.10
1	4.50	0.10	20.00	0.00	0.00	1.00	14.00	2.00	2500.00	232.00	10.50
1	1.80	0.10	20.00	0.00	0.00	1.00	14.00	2.00	2500.00	232.00	42.10
1	3.20	0.10	20.00	0.00	0.00	1.00	14.00	2.00	2500.00	232.00	37.10
0	4.70	0.10	20.00	0.00	0.00	1.00	14.00	2.00	2500.00	232.00	30.10
0	3.00	0.10	20.00	0.00	0.00	1.00	14.00	2.00	2500.00	232.00	30.20
0	2.40	0.10	20.00	0.00	0.00	1.00	14.00	2.00	2500.00	232.00	25.10
0	1.10	0.10	20.00	0.00	0.00	1.00	14.00	2.00	2500.00	232.00	10.60
0	4.90	0.10	20.00	0.00	0.00	1.00	14.00	2.00	2500.00	232.00	10.10
0	2.70	0.10	20.00	0.00	0.00	1.00	14.00	2.00	2500.00	232.00	8.10
1	6.60	0.50	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	232.00	23.10
1	7.30	0.50	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	232.00	30.10
1	10.20	0.50	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	232.00	42.10
1	9.50	0.50	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	232.00	25.10
0	8.80	0.60	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	232.00	37.10
0	8.80	0.50	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	232.00	30.20
0	10.50	0.50	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	232.00	43.10
0	10.80	0.50	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	232.00	10.60
0	7.10	0.50	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	232.00	10.10
0	7.50	0.50	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	232.00	10.50
0	9.30	0.60	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	232.00	8.10
1	17.60	0.80	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	247.00	42.50
1	14.60	0.80	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	247.00	37.10
0	16.00	0.90	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	247.00	42.10
0	12.10	0.80	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	247.00	23.10
0	13.00	0.90	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	247.00	30.10
0	15.00	0.90	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	247.00	30.20
0	15.30	0.90	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	247.00	25.10
0	16.20	0.80	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	247.00	43.10
0	16.70	0.80	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	247.00	10.60
0	12.90	0.80	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	247.00	10.10
0	13.30	0.90	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	247.00	10.50
0	15.00	0.90	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	247.00	8.10
1	8.80	1.00	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	30.20
0	10.50	1.00	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	10.60
0	9.60	1.00	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	42.10
0	6.00	1.00	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	23.10
0	6.70	1.00	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	30.10
0	8.30	1.00	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	37.10
0	8.90	1.00	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	25.10
0	10.00	1.00	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	43.10
0	11.30	1.00	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	42.50
0	6.60	1.00	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	10.10
0	7.00	1.00	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	10.50
0	8.70	1.00	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	8.10
1	4.90	1.20	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	10.60
1	4.40	1.20	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	43.10
1	1.30	1.30	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	30.10
1	5.60	1.30	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	42.50
1	4.00	1.30	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	42.10
0	0.10	1.30	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	23.10
0	2.70	1.30	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	37.10
0	3.70	1.30	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	30.20
0	1.10	1.30	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	10.10
1	1.50	1.30	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	10.50
0	3.20	1.30	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	240.00	8.10
1	0.20	1.40	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	222.00	42.50
1	4.70	1.40	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	222.00	30.10
0	1.80	1.40	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	222.00	42.10
0	6.00	1.50	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	222.00	23.10
0	3.30	1.40	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	222.00	37.10

0	2.30	1.40	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	222.00	30.20
0	2.70	1.40	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	222.00	25.10
0	1.50	1.50	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	222.00	43.10
0	1.10	1.50	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	222.00	10.60
0	4.90	1.50	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	222.00	10.10
0	4.50	1.40	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	222.00	10.50
0	2.70	1.40	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	222.00	8.10
1	1.00	0.00	20.00	0.00	0.00	1.00	14.00	2.50	4000.00	239.00	10.60
1	1.50	0.00	20.00	0.00	0.00	1.00	14.00	2.50	4000.00	239.00	43.10
1	2.40	0.10	20.00	0.00	0.00	1.00	14.00	2.50	4000.00	239.00	25.10
1	1.10	0.10	20.00	0.00	0.00	1.00	14.00	2.50	4000.00	239.00	42.10
0	5.70	0.10	20.00	0.00	0.00	1.00	14.00	2.50	4000.00	239.00	23.10
0	4.60	0.10	20.00	0.00	0.00	1.00	14.00	2.50	4000.00	239.00	30.10
0	3.20	0.10	20.00	0.00	0.00	1.00	14.00	2.50	4000.00	239.00	37.10
0	2.50	0.10	20.00	0.00	0.00	1.00	14.00	2.50	4000.00	239.00	30.20
1	0.70	0.00	20.00	0.00	0.00	1.00	14.00	2.50	4000.00	239.00	42.50
0	4.80	0.10	20.00	0.00	0.00	1.00	14.00	2.50	4000.00	239.00	10.10
0	4.40	0.10	20.00	0.00	0.00	1.00	14.00	2.50	4000.00	239.00	10.50
0	2.60	0.10	20.00	0.00	0.00	1.00	14.00	2.50	4000.00	239.00	8.10
1	4.10	0.30	20.00	0.00	0.00	1.00	15.00	2.50	4000.00	239.00	43.10
1	5.00	0.30	20.00	0.00	0.00	1.00	15.00	2.50	4000.00	239.00	42.50
0	4.50	0.20	20.00	0.00	0.00	1.00	15.00	2.50	4000.00	239.00	42.10
0	0.20	0.30	20.00	0.00	0.00	1.00	15.00	2.50	4000.00	239.00	23.10
0	0.90	0.20	20.00	0.00	0.00	1.00	15.00	2.50	4000.00	239.00	30.10
0	2.50	0.20	20.00	0.00	0.00	1.00	15.00	2.50	4000.00	239.00	37.10
0	2.90	0.20	20.00	0.00	0.00	1.00	15.00	2.5[illegible]	4000.00	239.00	30.20
0	3.20	0.20	20.00	0.00	0.00	1.00	15.00	2.[illegible]	4000.00	239.00	25.10
0	4.50	0.30	20.00	0.00	0.00	1.00	15.00	2[illegible]	4000.00	239.00	10.60
0	0.70	0.30	20.00	0.00	0.00	1.00	15.00	2.[illegible]	4000.00	239.00	10.10
0	1.00	0.20	20.00	0.00	0.00	1.00	15.00	2.50	4000.00	239.00	10.50
0	2.90	0.20	20.00	0.00	0.00	1.00	15.00	2.50	4000.00	239.00	8.10
1	11.40	0.40	20.00	0.00	0.00	1.00	15.00	2.50	2500.00	217.00	42.50
1	6.30	0.40	20.00	0.00	0.00	1.00	15.00	2.50	2500.00	243.00	23.10
1	7.70	0.50	20.00	0.00	0.00	1.00	15.00	2.50	2500.00	243.00	30.10
1	10.60	0.50	20.00	0.00	0.00	1.00	15.00	2.50	2500.00	243.00	43.10
1	7.80	0.50	20.00	0.00	0.00	1.00	15.00	2.50	2500.00	243.00	10.50
0	10.40	0.50	20.00	0.00	0.00	1.00	15.00	2.50	2000.00	243.00	42.10
0	[illegible].80	0.50	20.00	0.00	0.00	1.00	15.00	2.50	2000.00	243.00	37.10
0	[illegible].30	0.50	20.00	0.00	0.00	1.00	15.00	2.50	2000.00	243.00	30.20
0	9.70	0.50	20.00	0.00	0.00	1.00	15.00	2.50	2000.00	243.00	25.10
0	10.90	0.40	20.00	0.00	0.00	1.00	15.00	2.50	2000.00	243.00	10.60
0	7.20	0.50	20.00	0.00	0.00	1.00	15.00	2.50	2000.00	243.00	10.10
0	9.50	0.50	20.00	0.00	0.00	1.00	15.00	2.50	2000.00	243.00	8.10
1	15.00	0.60	20.00	0.00	0.00	1.00	16.00	2.50	2000.00	194.00	25.10
1	16.00	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2000.00	194.00	43.10
1	16.40	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2000.00	194.00	1[illegible].60
1	17.00	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2000.00	194.00	42.50
0	15.80	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2000.00	194.00	42.10
0	11.70	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2000.00	194.00	23.10
0	12.80	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2000.00	194.00	30.10
0	14.40	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2000.00	194.00	37.10
0	14.20	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2000.00	194.00	30.20
0	12.50	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2000.00	194.00	10.10
0	12.90	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2000.00	194.00	10.50
0	14.80	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2000.00	194.00	8.10
0	19.30	1.00	20.00	0.00	0.00	1.00	16.00	2.50	2500.00	194.00	30.10
0	19.40	1.00	20.00	0.00	0.00	1.00	16.00	2.50	2500.00	194.00	10.50
0	19.00	1.00	20.00	0.00	0.00	1.00	16.00	2.50	2500.00	194.00	10.10
0	17.80	1.00	20.00	0.00	0.00	1.00	16.00	2.50	2500.00	194.00	23.10
0	18.90	1.10	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	197.00	30.10
0	19.00	1.10	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	197.00	10.50
0	17.70	1.10	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	197.00	23.10
0	20.00	1.10	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	197.00	30.20

0	18.60	1.10	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	197.00	10.10
1	16.80	1.30	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	246.00	10.60
1	16.50	1.30	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	246.00	43.10
0	16.50	1.40	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	246.00	42.10
0	11.90	1.30	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	246.00	23.10
0	13.30	1.40	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	246.00	30.10
0	14.80	1.40	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	246.00	37.10
0	14.30	1.40	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	246.00	30.20
0	15.60	1.40	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	246.00	25.10
1	17.50	1.30	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	246.00	42.50
0	13.10	1.40	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	246.00	10.10
0	13.50	1.40	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	246.00	10.50
0	15.30	1.40	20.00	0.00	0.00	1.00	14.00	2.50	2500.00	246.00	8.10
1	10.60	1.50	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	203.00	43.10
1	8.10	1.50	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	203.00	30.20
1	7.00	1.50	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	203.00	10.10
1	11.50	1.50	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	203.00	42.50
0	10.40	1.50	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	203.00	42.10
0	6.00	1.50	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	203.00	23.10
1	7.20	1.50	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	203.00	30.10
0	8.60	1.50	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	203.00	37.10
0	9.30	1.50	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	203.00	25.10
0	10.80	1.50	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	203.00	10.60
0	7.40	1.50	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	203.00	10.50
0	9.20	1.50	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	203.00	8.10
1	5.60	1.70	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	247.00	42.50
1	4.90	1.70	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	247.00	10.60
0	4.20	1.80	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	247.00	42.10
0	0.20	1.80	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	247.00	23.10
0	1.40	1.80	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	247.00	30.10
0	2.80	1.80	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	247.00	37.10
0	2.50	1.80	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	247.00	30.20
0	3.40	1.80	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	247.00	25.10
0	4.60	1.80	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	247.00	43.10
0	1.10	1.80	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	247.00	10.10
1	1.50	1.80	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	247.00	10.50
0	3.30	1.80	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	247.00	8.10
1	4.60	1.90	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	192.00	10.50
1	3.30	1.90	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	192.00	30.20
1	0.50	2.00	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	192.00	42.50
0	2.00	2.00	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	192.00	42.10
0	5.70	2.00	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	192.00	23.10
0	4.70	2.00	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	192.00	30.10
0	3.30	1.90	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	192.00	37.10
0	2.50	2.00	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	192.00	25.10
0	1.50	2.00	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	192.00	43.10
0	1.20	2.00	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	192.00	10.60
0	5.00	2.00	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	192.00	10.10
0	2.70	1.90	20.00	0.00	0.00	1.00	16.00	3.00	2000.00	192.00	8.10

CG:103 12 OCT 88 FLAR

0	3.20	0.00	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	42.10
0	1.10	0.00	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	43.10
0	0.60	0.00	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	30.20
0	5.40	0.00	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	25.20
0	3.40	0.00	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	42.50
0	1.00	0.00	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	10.60
0	4.70	0.00	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	10.10
0	4.40	0.00	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	8.10
0	2.30	0.00	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	10.50
0	2.60	0.20	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	42.10
0	6.90	0.20	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	43.10
0	5.20	0.20	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	30.20
0	0.30	0.20	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	25.20
0	2.40	0.20	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	42.50
0	4.80	0.20	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	10.60
0	1.00	0.20	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	10.10
0	1.50	0.20	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	8.10
0	3.90	0.20	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	10.50
1	8.80	0.40	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	42.10
0	8.50	0.40	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	23.10
0	13.10	0.50	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	43.10
0	11.20	0.40	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	30.20
0	6.30	0.40	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	25.20
0	8.50	0.40	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	42.50
0	10.90	0.40	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	10.60
0	7.10	0.40	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	10.10
0	7.50	0.50	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	8.10
0	9.60	0.50	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	10.50
0	14.70	0.60	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	42.10
0	14.40	0.60	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	23.10
0	19.00	0.60	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	43.10
0	17.00	0.70	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	30.20
0	12.40	0.60	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	25.20
0	14.40	0.60	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	42.50
0	16.90	0.60	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	10.60
0	13.10	0.60	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	10.10
0	13.50	0.60	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	8.10
0	15.60	0.60	20.00	0.00	0.00	1.00	16.00	2.00	2500.00	225.00	10.50
0	19.50	0.90	20.00	0.00	0.00	1.00	14.00	2.00	2500.00	225.00	8.10
0	19.10	0.90	20.00	0.00	0.00	1.00	14.00	2.00	2500.00	225.00	10.10
0	18.30	0.90	20.00	0.00	0.00	1.00	14.00	2.00	2500.00	225.00	25.20
0	19.50	1.10	20.00	0.00	0.00	1.00	14.00	2.00	4000.00	225.00	8.10
0	19.20	1.10	20.00	0.00	0.00	1.00	14.00	2.00	4000.00	225.00	10.10
0	18.30	1.10	20.00	0.00	0.00	1.00	14.00	2.00	4000.00	225.00	25.20
0	16.90	1.30	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	10.60
1	17.40	1.30	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	30.20
1	19.00	1.30	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	43.10
0	15.70	1.30	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	10.50
0	13.60	1.30	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	8.10
1	14.40	1.30	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	42.50
0	13.10	1.30	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	10.10
0	14.30	1.30	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	23.10
0	12.40	1.30	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	25.20
0	14.70	1.30	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	42.10
1	8.40	1.50	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	42.50
1	11.70	1.50	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	30.20
0	9.60	1.50	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	10.50
0	7.60	1.50	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	8.10
0	13.10	1.50	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	43.10
0	7.10	1.50	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	10.10
0	8.20	1.50	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	23.10
0	6.40	1.50	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	25.20

0	10.90	1.50	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	10.60
0	8.70	1.50	20.00	0.00	0.00	1.00	17.00	2.00	4000.00	225.00	42.10
1	1.60	1.70	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	8.10
1	1.10	1.70	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	10.10
0	3.60	1.80	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	10.50
0	7.00	1.80	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	43.10
0	2.40	1.70	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	42.50
0	2.30	1.70	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	23.10
0	0.40	1.70	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	25.20
0	2.70	1.70	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	42.10
0	4.90	1.70	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	[illegible]0.60
0	5.50	1.70	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	30.20
1	2.30	1.90	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	10.50
1	3.60	1.90	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	42.50
1	3.30	1.90	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	42.10
1	0.50	1.90	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	30.20
0	4.40	1.90	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	8.10
0	1.00	1.90	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	43.10
0	4.80	1.90	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	10.10
0	3.80	1.90	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	23.10
0	5.70	1.90	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	25.20
0	1.00	1.90	20.00	0.00	0.00	1.00	23.00	2.50	4000.00	225.00	10.60

CG2103 14 OCT 88 FLAR

0	1.50	0.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	42.10
0	2.00	0.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	23.10
0	0.60	0.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	43.10
0	3.90	0.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	34.10
0	1.90	0.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	30.20
0	0.30	0.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	25.20
0	4.90	0.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	42.50
0	4.80	0.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	8.10
0	2.70	0.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	10.10
0	0.60	0.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	10.60
0	3.40	0.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	10.50
0	7.60	0.30	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	42.10
0	8.00	0.30	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	23.10
0	6.10	0.30	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	43.10
0	10.00	0.30	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	34.10
0	7.90	0.30	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	30.20
0	6.30	0.20	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	25.20
0	11.00	0.30	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	42.50
0	10.80	0.30	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	8.10
0	8.70	0.30	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	10.10
0	6.60	0.30	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	10.60
0	9.40	0.30	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	10.50
1	11.80	0.40	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	225.00	43.10
0	13.50	0.40	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	225.00	42.10
0	14.00	0.40	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	225.00	23.10
0	15.90	0.50	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	225.00	34.10
0	1[illegible].90	0.50	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	225.00	30.20
0	[illegible]	0.50	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	225.00	25.20
0	17.[illegible]	0.40	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	225.00	42.50
0	16.90	0.50	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	225.00	8.10
0	14.70	0.50	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	225.00	10.10
0	12.60	0.50	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	225.00	10.60
0	15.30	0.50	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	225.00	[illegible].50
1	18.60	0.70	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	225.00	10.60
0	19.50	0.70	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	225.00	42.10
0	17.90	0.70	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	225.00	43.10
0	19.80	0.70	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	225.00	30.20
0	18.40	0.70	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	225.00	25.20
0	19.70	0.80	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	42.10
0	20.00	0.70	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	23.10
0	17.80	0.80	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	43.10
0	19.90	0.80	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	30.20
0	18.40	0.80	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	25.20
0	18.70	0.80	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	10.60
0	13.60	1.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	42.10
0	14.00	1.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	23.10
0	11.90	1.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	43.10
0	15.80	1.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	34.10
0	13.80	1.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	30.20
0	12.40	1.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	25.20
0	17.10	1.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	42.50
0	16.80	1.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	8.10
0	14.70	1.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	10.10
0	12.70	1.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	10.60
0	15.40	1.00	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	10.50
1	8.10	1.20	20.00	0.00	0.00	1.00	12.00	2.00	2500.00	225.00	23.10
1	11.10	1.20	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	42.50
1	8.80	1.20	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	10.10
1	5.70	1.20	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	43.10
0	7.60	1.20	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	42.10
0	10.10	1.20	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	34.10
0	8.00	1.20	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	30.20

0	6.40	1.20	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	25.20
0	10.90	1.20	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	8.10
0	6.70	1.20	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	10.60
0	9.50	1.20	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	10.50
1	2.80	1.40	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	10.10
0	1.60	1.50	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	42.10
0	2.00	1.50	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	23.10
0	0.00	1.50	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	43.10
0	3.80	1.50	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	34.10
0	2.00	1.50	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	30.20
0	0.40	1.40	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	25.20
0	5.10	1.50	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	42.50
0	4.80	1.50	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	8.10
0	0.70	1.50	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	10.60
0	3.40	1.50	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	10.50
1	0.90	1.60	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	42.50
0	4.30	1.60	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	42.10
0	3.90	1.60	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	23.10
0	6.00	1.70	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	43.10
0	2.00	1.60	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	34.10
0	3.90	1.70	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	30.20
0	5.40	1.70	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	25.20
0	1.10	1.70	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	8.10
0	3.20	1.70	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	10.10
0	5.30	1.70	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	10.60
0	2.50	1.60	20.00	0.00	0.00	1.00	13.00	2.00	2500.00	225.00	10.50
1	4.10	0.00	20.00	0.00	0.00	1.00	14.00	2.50	4500.00	225.00	23.10
1	5.30	0.00	20.00	0.00	0.00	1.00	14.00	2.50	4500.00	225.00	10.60
0	4.40	0.10	20.00	0.00	0.00	1.00	14.00	2.50	4500.00	225.00	42.10
0	2.50	0.00	20.00	0.00	0.00	1.00	14.00	2.50	4500.00	225.00	10.50
0	0.30	0.00	20.00	0.00	0.00	1.00	14.00	2.50	4500.00	225.00	42.50
0	2.40	0.00	20.00	0.00	0.00	1.00	14.00	2.50	4500.00	225.00	34.10
0	1.20	0.00	20.00	0.00	0.00	1.00	14.00	2.50	4500.00	225.00	8.10
0	3.20	0.00	20.00	0.00	0.00	1.00	14.00	2.50	4500.00	225.00	10.10
0	4.80	0.00	20.00	0.00	0.00	1.00	14.00	2.50	4500.00	225.00	43.10
0	3.50	0.00	20.00	0.00	0.00	1.00	14.00	2.50	4500.00	225.00	30.20
0	1.30	0.00	20.00	0.00	0.00	1.00	14.00	2.50	4500.00	225.00	29.10
0	5.40	0.00	20.00	0.00	0.00	1.00	14.00	2.50	4500.00	225.00	25.20
1	1.60	0.20	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	42.10
0	0.70	0.20	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	10.60
1	1.20	0.20	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	43.10
1	1.90	0.20	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	23.10
1	0.50	0.20	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	25.20
1	4.60	0.20	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	29.10
0	2.80	0.20	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	10.10
0	3.40	0.20	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	10.50
0	3.50	0.20	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	34.10
0	2.50	0.20	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	30.20
0	6.20	0.20	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	42.50
0	4.80	0.20	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	8.10
1	8.50	0.40	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	30.20
1	9.40	0.40	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	34.10
1	12.20	0.40	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	42.50
1	7.60	0.40	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	42.10
0	7.90	0.50	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	23.10
0	7.10	0.40	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	43.10
0	6.40	0.40	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	25.20
0	10.80	0.50	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	8.10
0	8.80	0.40	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	10.10
0	6.70	0.50	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	10.60
0	9.30	0.50	20.00	0.00	0.00	1.00	9.00	2.00	4500.00	225.00	10.50
1	13.00	0.60	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	43.10
0	13.50	0.60	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	42.10

0	13.80	0.60	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	23.10
0	16.50	0.70	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	29.10
0	15.20	0.60	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	34.10
0	14.40	0.70	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	30.20
0	12.50	0.70	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	25.20
0	18.10	0.60	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	42.50
0	16.80	0.60	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	8.10
0	14.80	0.60	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	10.10
0	12.70	0.60	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	10.60
0	15.30	0.60	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	10.50
1	18.80	0.90	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	43.10
1	19.40	0.90	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	42.10
0	19.90	0.90	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	23.10
0	18.40	0.90	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	25.20
0	18.60	0.90	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	10.60
1	19.60	1.00	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	3.10
1	19.00	1.00	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	43.10
0	19.80	1.00	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	23.10
0	18.40	1.00	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	25.20
0	18.70	1.00	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	10.60
1	16.60	1.20	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	29.10
1	13.00	1.20	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	43.10
1	15.60	1.30	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	34.10
0	13.60	1.30	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	42.10
0	13.60	1.20	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	23.10
0	14.30	1.20	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	30.20
0	12.40	1.20	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	25.20
0	18.20	1.20	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	42.50
0	16.80	1.20	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	8.10
0	14.70	1.20	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	10.10
0	12.60	1.20	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	10.60
0	15.40	1.30	20.00	0.00	0.00	1.00	13.00	2.00	4500.00	225.00	10.50
1	7.50	1.40	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	42.10
1	9.40	1.40	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	10.50
0	10.80	1.40	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	8.10
1	12.30	1.40	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	42.50
1	9.50	1.40	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	34.10
1	8.70	1.40	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	10.10
1	6.90	1.40	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	43.10
1	6.40	1.40	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	25.20
1	10.60	1.40	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	29.10
0	7.60	1.40	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	23.10
0	8.30	1.40	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	30.20
0	6.70	1.40	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	10.60
1	4.60	1.60	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	29.10
1	0.90	1.60	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	43.10
1	1.30	1.60	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	23.10
0	1.60	1.70	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	42.10
0	3.30	1.70	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	34.10
0	2.10	1.70	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	30.20
0	0.40	1.60	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	25.20
0	6.30	1.70	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	42.50
0	4.80	1.70	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	8.10
0	2.70	1.70	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	10.10
0	0.70	1.70	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	10.60
0	3.40	1.70	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	10.50
1	4.30	1.80	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	42.10
1	5.20	1.80	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	10.60
1	2.60	1.80	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	34.10
1	5.00	1.80	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	43.10
1	3.90	1.80	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	30.20
0	4.90	1.90	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	23.10
0	1.30	1.90	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	29.10

0	5.50	1.90	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	25.20
0	0.40	1.90	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	42.50
0	1.10	1.90	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	8.10
0	3.20	1.90	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	10.10
0	2.50	1.80	20.00	0.00	0.00	1.00	18.00	2.00	4500.00	225.00	10.50

CG2103 17 OCT 88 FLAR

1	1.80	0.00	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	34.20
0	4.40	0.10	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	42.10
0	3.90	0.00	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	34.10
0	2.50	0.00	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	29.10
0	6.00	0.00	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	43.10
0	4.00	0.10	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	32.10
0	5.50	0.00	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	30.20
0	0.50	0.10	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	42.50
0	1.00	0.00	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	10.10
0	3.20	0.00	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	10.60
0	5.20	0.00	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	10.50
0	2.40	0.10	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	8.10
1	4.30	0.20	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	34.20
0	1.70	0.20	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	42.10
0	2.10	0.30	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	34.10
0	3.50	0.20	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	29.10
0	0.20	0.20	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	43.10
0	0.60	0.20	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	28.10
0	2.20	0.20	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	32.10
0	0.60	0.30	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	30.20
0	5.60	0.20	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	42.50
0	5.10	0.20	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	10.10
0	2.90	0.20	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	10.60
0	0.90	0.20	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	10.50
0	3.80	0.20	20.00	0.00	0.00	1.00	11.00	2.50	2500.00	225.00	8.10
0	10.40	0.50	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	34.20
1	8.50	0.50	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	34.10
1	5.70	0.50	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	43.10
1	11.40	0.50	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	42.50
0	7.50	0.50	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	42.10
0	9.60	0.50	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	29.10
0	6.40	0.50	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	28.10
0	8.00	0.50	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	32.10
0	6.80	0.50	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	30.20
0	10.90	0.50	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	10.10
0	8.90	0.50	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	10.60
0	6.70	0.50	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	10.50
0	9.50	0.50	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	8.10
1	12.20	0.60	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	28.10
1	13.20	0.60	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	42.10
1	15.20	0.60	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	8.10
1	11.40	0.60	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	43.10
1	13.60	0.60	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	34.10
1	15.70	0.70	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	34.20
0	15.90	0.70	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	29.10
0	13.80	0.70	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	32.10
0	12.60	0.70	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	30.20
0	17.20	0.70	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	42.50
0	16.50	0.70	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	10.10
0	14.40	0.70	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	10.60
0	12.30	0.70	20.00	0.00	1.00	1.00	11.00	2.50	2500.00	225.00	10.50
1	18.10	0.90	20.00	0.00	1.00	1.00	10.00	2.00	2500.00	225.00	43.10
0	20.00	0.90	20.00	0.00	1.00	1.00	10.00	2.00	2500.00	225.00	42.10
0	19.00	0.90	20.00	0.00	1.00	1.00	10.00	2.00	2500.00	225.00	28.10
0	19.60	0.90	20.00	0.00	1.00	1.00	10.00	2.00	2500.00	225.00	30.20
0	19.10	0.90	20.00	0.00	1.00	1.00	10.00	2.00	2500.00	225.00	10.50
1	17.90	1.00	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	236.00	43.10
0	20.00	1.00	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	236.00	42.10
0	19.00	1.00	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	236.00	28.10
0	19.60	1.00	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	236.00	30.20
0	19.10	1.00	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	236.00	10.50
1	13.60	1.20	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	228.00	42.10

1	14.00	1.20	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	228.00	34.10
1	16.30	1.20	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	228.00	34.20
1	11.30	1.20	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	228.00	43.10
1	12.50	1.20	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	228.00	28.10
1	14.00	1.20	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	228.00	32.10
1	13.50	1.20	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	228.00	30.20
0	16.30	1.20	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	228.00	29.10
0	17.50	1.20	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	228.00	42.50
0	16.90	1.20	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	228.00	10.10
0	14.70	1.20	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	228.00	10.60
0	12.60	1.20	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	228.00	10.50
0	15.50	1.20	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	228.00	8.10
1	7.50	1.40	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	230.00	42.10
1	8.10	1.40	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	230.00	34.10
1	10.40	1.40	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	230.00	34.20
1	6.20	1.40	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	230.00	43.10
1	8.00	1.40	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	230.00	32.10
1	11.40	1.40	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	230.00	42.50
0	10.20	1.40	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	230.00	29.10
0	6.60	1.40	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	230.00	28.10
0	7.80	1.40	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	230.00	30.20
0	10.90	1.40	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	230.00	10.10
0	8.70	1.40	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	230.00	10.60
0	6.70	1.40	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	230.00	10.50
0	9.50	1.40	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	230.00	8.10
1	1.70	1.60	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	229.00	42.10
1	2.10	1.60	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	229.00	34.10
1	4.40	1.60	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	229.00	34.20
1	0.00	1.60	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	229.00	43.10
1	0.70	1.60	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	229.00	28.10
1	1.90	1.60	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	229.00	30.20
1	5.60	1.60	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	229.00	42.50
0	4.10	1.60	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	229.00	29.10
0	2.20	1.60	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	229.00	32.10
0	5.10	1.60	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	229.00	10.10
0	2.90	1.60	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	229.00	10.60
0	0.90	1.60	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	229.00	10.50
0	3.70	1.60	20.00	0.00	0.00	1.00	10.00	2.00	2500.00	229.00	8.10
1	5.40	1.80	20.00	0.00	0.00	1.00	12.00	1.50	2500.00	242.00	28.10
1	1.10	1.80	20.00	0.00	0.00	1.00	12.00	1.50	2500.00	242.00	10.10
0	3.30	1.80	20.00	0.00	0.00	1.00	12.00	1.50	2500.00	242.00	10.60
0	4.40	1.80	20.00	0.00	0.00	1.00	12.00	1.50	2500.00	242.00	42.10
0	3.80	1.80	20.00	0.00	0.00	1.00	12.00	1.50	2500.00	242.00	34.10
0	2.30	1.80	20.00	0.00	0.00	1.00	12.00	1.50	2500.00	242.00	29.10
0	1.90	1.80	20.00	0.00	0.00	1.00	12.00	1.50	2500.00	242.00	34.20
0	6.40	1.80	20.00	0.00	0.00	1.00	12.00	1.50	2500.00	242.00	43.10
0	3.90	1.80	20.00	0.00	0.00	1.00	12.00	1.50	2500.00	242.00	32.10
0	5.20	1.80	20.00	0.00	0.00	1.00	12.00	1.50	2500.00	242.00	30.20
0	0.60	1.80	20.00	0.00	0.00	1.00	12.00	1.50	2500.00	242.00	42.50
0	5.20	1.80	20.00	0.00	0.00	1.00	12.00	1.50	2500.00	242.00	10.50
0	2.40	1.80	20.00	0.00	0.00	1.00	12.00	1.50	2500.00	242.00	8.10
1	3.80	0.00	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	255.00	34.10
1	1.70	0.00	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	255.00	34.20
1	1.00	0.00	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	255.00	10.10
1	2.40	0.10	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	255.00	8.10
1	0.50	0.10	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	255.00	42.50
1	4.00	0.10	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	255.00	32.10
1	6.20	0.10	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	255.00	43.10
0	2.30	0.10	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	255.00	29.10
0	5.60	0.10	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	255.00	28.10
1	3.20	0.00	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	255.00	10.60
0	5.30	0.10	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	255.00	10.50
1	5.50	0.20	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	253.00	42.50

1	0.80	0.20	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	253.00	10.50
1	4.40	0.20	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	253.00	34.20
1	2.10	0.20	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	253.00	34.10
0	1.70	0.20	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	253.00	42.10
0	3.60	0.20	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	253.00	29.10
0	0.10	0.20	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	253.00	43.10
0	0.60	0.20	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	253.00	28.10
0	2.10	0.20	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	253.00	32.10
0	5.00	0.20	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	253.00	10.10
0	2.80	0.20	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	253.00	10.60
0	3.70	0.20	20.00	0.00	0.00	1.00	8.00	1.00	4000.00	253.00	8.10
1	16.80	0.60	20.00	1.00	0.00	1.00	8.00	1.00	4000.00	252.00	10.10
1	15.50	0.60	20.00	1.00	0.00	1.00	8.00	1.00	4000.00	252.00	8.10
1	13.50	0.60	20.00	1.00	0.00	1.00	8.00	1.00	4000.00	252.00	42.10
0	11.50	0.60	20.00	1.00	0.00	1.00	8.00	1.00	4000.00	252.00	43.10
0	14.70	0.60	20.00	1.00	0.00	1.00	8.00	1.00	4000.00	252.00	10.60
0	14.50	0.60	20.00	1.00	0.00	1.00	8.00	1.00	4000.00	252.00	34.10
0	15.40	0.60	20.00	1.00	0.00	1.00	8.00	1.00	4000.00	252.00	29.10
0	16.10	0.60	20.00	1.00	0.00	1.00	8.00	1.00	4000.00	252.00	34.20
0	12.50	0.60	20.00	1.00	0.00	1.00	8.00	1.00	4000.00	252.00	28.10
0	13.90	0.60	20.00	1.00	0.00	1.00	8.00	1.00	4000.00	252.00	32.10
0	17.30	0.60	20.00	1.00	0.00	1.00	8.00	1.00	4000.00	252.00	42.50
0	12.60	0.60	20.00	1.00	0.00	1.00	8.00	1.00	4000.00	252.00	10.50
1	18.20	0.90	20.00	1.00	0.00	1.00	8.00	1.00	4000.00	252.00	43.10
0	19.10	0.90	20.00	1.00	0.00	1.00	8.00	1.00	4000.00	252.00	28.10
0	19.10	0.90	20.00	1.00	0.00	1.00	8.00	1.00	4000.00	252.00	10.50

CG2103 19 OCT 88 FLAR 40 nmi RANGE SCALE

1	4.20	0.10	40.00	0.00	0.00	1.00	15.00	2.00	4000.00	220.00	32.10
0	5.70	0.10	40.00	0.00	0.00	1.00	15.00	2.00	4000.00	220.00	42.10
0	0.60	0.10	40.00	0.00	0.00	1.00	15.00	2.00	4000.00	220.00	34.20
0	3.40	0.10	40.00	0.00	0.00	1.00	15.00	2.00	4000.00	220.00	30.20
0	2.50	0.10	40.00	0.00	0.00	1.00	15.00	2.00	4000.00	220.00	43.10
0	2.20	0.10	40.00	0.00	0.00	1.00	15.00	2.00	4000.00	220.00	8.10
0	0.80	0.10	40.00	0.00	0.00	1.00	15.00	2.00	4000.00	220.00	10.60
0	1.30	0.10	40.00	0.00	0.00	1.00	15.00	2.00	4000.00	220.00	10.50
0	4.40	0.10	40.00	0.00	0.00	1.00	15.00	2.00	4000.00	220.00	10.10
1	8.30	0.30	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	220.00	42.50
1	10.70	0.30	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	220.00	10.60
1	7.40	0.30	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	220.00	43.10
0	4.30	0.30	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	220.00	42.10
0	10.60	0.30	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	220.00	34.20
0	6.40	0.30	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	220.00	30.20
0	5.80	0.30	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	220.00	32.10
0	12.10	0.30	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	220.00	8.10
0	8.60	0.30	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	220.00	10.50
0	5.50	0.30	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	220.00	10.10
0	14.30	0.50	40.00	0.00	1.00	1.00	15.00	2.00	4000.00	220.00	42.10
0	20.70	0.50	40.00	0.00	1.00	1.00	15.00	2.00	4000.00	220.00	34.20
1	21.40	0.50	40.00	0.00	1.00	1.00	15.00	2.00	4000.00	220.00	29.10
0	16.40	0.50	40.00	0.00	1.00	1.00	15.00	2.00	4000.00	220.00	30.20
0	17.70	0.50	40.00	0.00	1.00	1.00	15.00	2.00	4000.00	220.00	43.10
0	15.80	0.50	40.00	0.00	1.00	1.00	15.00	2.00	4000.00	220.00	32.10
0	18.20	0.50	40.00	0.00	1.00	1.00	15.00	2.00	4000.00	220.00	42.50
0	22.20	0.50	40.00	0.00	1.00	1.00	15.00	2.00	4000.00	220.00	8.10
0	20.80	0.50	40.00	0.00	1.00	1.00	15.00	2.00	4000.00	220.00	10.60
0	18.60	0.50	40.00	0.00	1.00	1.00	15.00	2.00	4000.00	220.00	10.50
0	15.50	0.50	40.00	0.00	1.00	1.00	15.00	2.00	4000.00	220.00	10.10
1	30.50	0.70	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	34.20
1	24.30	0.80	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	42.10
0	30.80	0.70	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	29.10
0	26.10	0.80	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	30.20
0	27.40	0.80	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	43.10
0	25.80	0.70	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	32.10
1	28.20	0.70	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	42.50
0	32.00	0.80	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	8.10
0	30.70	0.80	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	10.60
0	28.50	0.80	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	10.50
0	25.50	0.80	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	10.10
0	34.30	1.00	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	42.10
0	36.20	0.90	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	30.20
0	37.60	1.00	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	43.10
0	35.80	1.00	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	32.10
0	38.30	1.00	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	42.50
0	38.70	0.90	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	10.50
0	35.70	1.00	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	10.10
0	34.40	1.20	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	42.10
0	36.30	1.20	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	30.20
0	37.60	1.20	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	43.10
0	35.80	1.20	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	32.10
0	38.50	1.20	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	42.50
0	38.80	1.20	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	10.50
0	35.80	1.20	40.00	1.00	0.00	1.00	14.00	2.00	4000.00	220.00	10.10
1	30.40	1.30	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	34.20
1	27.50	1.30	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	43.10
0	24.20	1.40	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	42.10
0	31.40	1.40	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	29.10
0	27.00	1.40	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	30.20
0	25.80	1.40	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	32.10
0	28.30	1.40	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	42.50

0	32.20	1.40	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	8.10
0	30.60	1.40	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	10.60
0	28.80	1.40	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	10.50
0	25.60	1.40	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	10.10
0	21.40	1.60	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	29.10
1	14.20	1.60	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	42.10
0	20.40	1.60	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	34.20
0	17.20	1.60	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	30.20
0	17.80	1.60	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	43.10
0	16.00	1.60	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	32.10
0	18.40	1.60	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	42.50
0	22.20	1.60	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	8.10
0	20.70	1.60	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	10.60
1	18.80	1.60	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	10.50
0	15.60	1.60	40.00	1.00	0.00	1.00	17.00	2.00	4000.00	220.00	10.10
1	4.20	1.80	40.00	1.00	0.00	1.00	28.00	3.00	4000.00	220.00	42.10
1	8.20	1.80	40.00	1.00	0.00	1.00	28.00	3.00	4000.00	220.00	42.50
1	7.60	1.80	40.00	1.00	0.00	1.00	28.00	3.00	4000.00	220.00	43.10
1	10.30	1.80	40.00	1.00	0.00	1.00	28.00	3.00	4000.00	220.00	34.20
0	11.20	1.80	40.00	1.00	0.00	1.00	28.00	3.00	4000.00	220.00	29.10
0	6.90	1.80	40.00	1.00	0.00	1.00	28.00	3.00	4000.00	220.00	30.20
0	5.90	1.80	40.00	1.00	0.00	1.00	28.00	3.00	4000.00	220.00	32.10
0	12.10	1.80	40.00	1.00	0.00	1.00	28.00	3.00	4000.00	220.00	8.10
0	10.60	1.80	40.00	1.00	0.00	1.00	28.00	3.00	4000.00	220.00	10.60
0	8.60	1.80	40.00	1.00	0.00	1.00	28.00	3.00	4000.00	220.00	10.50
0	5.50	1.80	40.00	1.00	0.00	1.00	28.00	3.00	4000.00	220.00	10.10
1	5.70	2.00	40.00	0.00	0.00	1.00	28.00	3.00	4000.00	220.00	42.10
0	0.30	2.10	40.00	0.00	0.00	1.00	28.00	3.00	4000.00	220.00	34.20
0	1.20	2.00	40.00	0.00	0.00	1.00	28.00	3.00	4000.00	220.00	29.10
0	3.20	2.10	40.00	0.00	0.00	1.00	28.00	3.00	4000.00	220.00	30.20
0	2.40	2.00	40.00	0.00	0.00	1.00	28.00	3.00	4000.00	220.00	43.10
0	4.30	2.00	40.00	0.00	0.00	1.00	28.00	3.00	4000.00	220.00	32.10
0	1.50	2.10	40.00	0.00	0.00	1.00	28.00	3.00	4000.00	220.00	42.50
0	2.20	2.10	40.00	0.00	0.00	1.00	28.00	3.00	4000.00	220.00	8.10
0	0.80	2.10	40.00	0.00	0.00	1.00	28.00	3.00	4000.00	220.00	10.60
0	1.30	2.10	40.00	0.00	0.00	1.00	28.00	3.00	4000.00	220.00	10.50
0	4.40	2.10	40.00	0.00	0.00	1.00	28.00	3.00	4000.00	220.00	10.10

CG2103 21 OCT 88 FLAR 40 nmi RANGE SCALE

1	5.20	0.40	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	235.00	10.60
1	10.40	0.40	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	235.00	10.50
0	3.60	0.40	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	235.00	42.10
0	10.20	0.40	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	235.00	34.20
0	11.00	0.50	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	235.00	29.10
0	7.00	0.40	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	235.00	30.20
0	7.30	0.50	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	235.00	43.10
0	5.40	0.40	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	235.00	32.10
0	6.50	0.50	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	235.00	28.10
0	8.00	0.40	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	235.00	42.50
0	11.60	0.40	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	235.00	8.10
0	8.20	0.40	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	235.00	10.10
1	17.20	0.60	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	230.00	43.10
1	13.60	0.60	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	230.00	42.10
1	20.40	0.60	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	230.00	10.50
1	18.20	0.60	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	230.00	10.10
0	20.20	0.70	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	230.00	34.20
0	21.20	0.60	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	230.00	29.10
0	16.90	0.70	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	230.00	30.20
0	15.30	0.60	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	230.00	32.10
0	16.40	0.60	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	230.00	28.10
0	17.90	0.70	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	230.00	42.50
0	21.50	0.70	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	230.00	8.10
0	15.10	0.70	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	230.00	10.60
1	27.40	0.80	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	248.00	43.10
0	25.40	0.80	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	248.00	10.60
0	23.80	0.80	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	248.00	42.10
0	30.40	0.80	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	248.00	34.20
0	31.30	0.90	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	248.00	29.10
0	27.20	0.80	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	248.00	30.20
0	25.60	0.90	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	248.00	32.10
0	26.80	0.90	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	248.00	28.10
0	28.00	0.90	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	248.00	42.50
0	31.70	0.80	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	248.00	8.10
0	30.60	0.80	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	248.00	10.50
0	28.40	0.80	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	248.00	10.10
1	36.50	1.00	40.00	1.00	0.00	1.00	15.00	1.50	4000.00	238.00	28.10
0	33.50	1.00	40.00	1.00	0.00	1.00	15.00	1.50	4000.00	238.00	42.10
0	37.00	1.10	40.00	1.00	0.00	1.00	15.00	1.50	4000.00	238.00	30.20
0	37.40	1.00	40.00	1.00	0.00	1.00	15.00	1.50	4000.00	238.00	43.10
0	35.30	1.00	40.00	1.00	0.00	1.00	15.00	1.50	4000.00	238.00	32.10
0	37.90	1.00	40.00	1.00	0.00	1.00	15.00	1.50	4000.00	238.00	42.50
0	38.40	1.10	40.00	1.00	0.00	1.00	15.00	1.50	4000.00	238.00	10.10
0	35.00	1.10	40.00	1.00	0.00	1.00	15.00	1.50	4000.00	238.00	10.60
1	35.20	1.20	40.00	1.00	0.00	1.00	15.00	1.50	4000.00	247.00	10.60
0	33.60	1.20	40.00	1.00	0.00	1.00	15.00	1.50	4000.00	247.00	42.10
0	37.20	1.20	40.00	1.00	0.00	1.00	15.00	1.50	4000.00	247.00	30.20
0	37.20	1.20	40.00	1.00	0.00	1.00	15.00	1.50	4000.00	247.00	43.10
0	35.30	1.20	40.00	1.00	0.00	1.00	15.00	1.50	4000.00	247.00	32.10
0	36.60	1.20	40.00	1.00	0.00	1.00	15.00	1.50	4000.00	247.00	28.10
0	38.30	1.20	40.00	1.00	0.00	1.00	15.00	1.50	4000.00	247.00	42.50
0	38.00	1.20	40.00	1.00	0.00	1.00	15.00	1.50	4000.00	247.00	10.10
1	26.60	1.40	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	247.00	28.10
1	28.20	1.40	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	247.00	42.50
1	27.20	1.40	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	247.00	30.20
0	23.50	1.50	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	247.00	42.10
0	30.10	1.40	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	247.00	34.20
0	31.10	1.40	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	247.00	29.10
0	27.40	1.40	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	247.00	43.10
0	25.30	1.40	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	247.00	32.10
0	31.50	1.50	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	247.00	8.10
0	30.20	1.50	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	247.00	10.50

0	28.20	1.50	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	247.00	10.10
0	25.20	1.50	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	247.00	10.60
1	21.00	1.60	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	29.10
1	18.00	1.60	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	42.50
0	20.20	1.60	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	10.50
1	15.20	1.60	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	10.60
1	17.20	1.60	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	43.10
1	20.20	1.60	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	34.20
0	13.60	1.60	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	42.10
0	17.20	1.60	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	30.20
0	15.40	1.60	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	32.10
0	16.40	1.70	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	28.10
0	21.70	1.60	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	8.10
0	18.20	1.60	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	10.10
1	7.60	1.80	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	43.10
1	7.30	1.90	40.00	1.00	0.00	1.00	18.00	2.00	4000.00	254.00	30.20
0	10.20	1.80	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	34.20
1	8.20	1.80	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	10.10
0	3.60	1.80	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	42.10
0	11.00	1.80	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	29.10
0	5.40	1.80	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	32.10
0	6.80	1.80	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	28.10
0	8.00	1.80	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	42.50
0	11.60	1.90	40.00	1.00	0.00	1.00	18.00	2.00	4000.00	254.00	8.10
0	10.40	1.80	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	10.50
0	5.20	1.80	40.00	1.00	0.00	1.00	15.00	2.00	4000.00	254.00	10.60
1	10.60	0.00	40.00	0.00	0.00	1.00	23.00	2.50	4000.00	246.00	34.20
1	8.00	0.10	40.00	0.00	0.00	1.00	23.00	2.50	4000.00	246.00	42.50
1	6.60	0.10	40.00	0.00	0.00	1.00	23.00	2.50	4000.00	246.00	28.10
1	7.30	0.10	40.00	0.00	0.00	1.00	23.00	2.50	4000.00	246.00	43.10
0	3.60	0.10	40.00	0.00	0.00	1.00	23.00	2.50	4000.00	246.00	42.10
0	11.40	0.10	40.00	0.00	0.00	1.00	23.00	2.50	4000.00	246.00	29.10
0	7.50	0.00	40.00	0.00	0.00	1.00	23.00	2.50	4000.00	246.00	30.20
0	11.60	0.10	40.00	0.00	0.00	1.00	23.00	2.50	4000.00	246.00	8.10
0	10.50	0.10	40.00	0.00	0.00	1.00	23.00	2.50	4000.00	246.00	10.50
0	8.20	0.00	40.00	0.00	0.00	1.00	23.00	2.50	4000.00	246.00	10.10
0	5.20	0.10	40.00	0.00	0.00	1.00	23.00	2.50	4000.00	246.00	10.60
1	21.40	0.20	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	221.00	29.10
1	17.50	0.20	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	221.00	30.20
1	15.40	0.20	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	221.00	32.10
0	13.50	0.30	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	221.00	42.10
0	20.20	0.30	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	221.00	34.20
0	17.30	0.30	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	221.00	43.10
0	16.60	0.30	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	221.00	28.10
0	17.80	0.30	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	221.00	42.50
0	21.50	0.30	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	221.00	8.10
0	20.30	0.30	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	221.00	10.50
0	18.20	0.30	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	221.00	10.10
0	15.20	0.30	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	221.00	10.60
0	31.60	0.50	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	256.00	29.10
0	23.60	0.50	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	256.00	42.10
0	30.10	0.50	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	256.00	34.20
0	27.60	0.50	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	256.00	30.20
0	27.20	0.50	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	256.00	43.10
0	25.30	0.50	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	256.00	32.10
0	26.60	0.50	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	256.00	28.10
0	27.90	0.50	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	256.00	42.50
1	31.60	0.50	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	256.00	8.10
0	30.40	0.50	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	256.00	10.50
0	28.20	0.50	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	256.00	10.10
0	25.20	0.50	40.00	0.00	0.00	1.00	24.00	3.00	4000.00	256.00	10.60
0	33.50	0.70	40.00	0.00	0.00	1.00	23.00	3.50	4000.00	230.00	42.10
0	37.40	0.70	40.00	0.00	0.00	1.00	23.00	3.50	4000.00	230.00	30.20

0	37.40	0.70	40.00	0.00	0.00	1.00	23.00	3.50	4000.00	230.00	43.10
0	35.20	0.70	40.00	0.00	0.00	1.00	23.00	3.50	4000.00	230.00	32.10
0	36.60	0.70	40.00	0.00	0.00	1.00	23.00	3.50	4000.00	230.00	28.10
0	37.80	0.70	40.00	0.00	0.00	1.00	23.00	3.50	4000.00	230.00	42.50
0	38.20	0.70	40.00	0.00	0.00	1.00	23.00	3.50	4000.00	230.00	10.10
0	35.10	0.70	40.00	0.00	0.00	1.00	23.00	3.50	4000.00	230.00	10.60

CG2103 24 OCT 88 FLAR 40 nmi RANGE SCALE

1	17.60	0.00	40.00	0.00	0.00	1.00	9.50	1.00	4000.00	221.00	43.10
1	18.00	0.10	40.00	0.00	0.00	1.00	9.50	1.00	4000.00	221.00	10.60
0	16.60	0.10	40.00	0.00	0.00	1.00	9.50	1.00	4000.00	221.00	30.20
1	13.80	0.10	40.00	0.00	0.00	1.00	9.50	1.00	4000.00	221.00	42.10
1	15.00	0.10	40.00	0.00	0.00	1.00	9.50	1.00	4000.00	221.00	10.50
1	20.10	0.10	40.00	0.00	0.00	1.00	9.50	1.00	4000.00	221.00	38.10
0	21.20	0.10	40.00	0.00	0.00	1.00	9.50	1.00	4000.00	221.00	42.50
0	21.60	0.10	40.00	0.00	0.00	1.00	9.50	1.00	4000.00	221.00	8.10
0	20.20	0.10	40.00	0.00	0.00	1.00	9.50	1.00	4000.00	221.00	10.10
1	23.70	0.20	40.00	0.00	0.00	1.00	9.50	1.00	4000.00	221.00	42.10
1	25.10	0.20	40.00	0.00	0.00	1.00	9.50	1.00	4000.00	221.00	10.50
1	27.80	0.30	40.00	0.00	0.00	1.00	9.50	1.00	4000.00	221.00	43.10
0	30.20	0.30	40.00	0.00	0.00	1.00	9.50	1.00	4000.00	221.00	38.10
0	26.70	0.30	40.00	0.00	0.00	1.00	9.50	1.00	4000.00	221.00	30.20
1	31.40	0.30	40.00	0.00	0.00	1.00	9.50	1.00	4000.00	221.00	42.50
0	31.70	0.30	40.00	0.00	0.00	1.00	9.50	1.00	4000.00	221.00	8.10
0	30.20	0.30	40.00	0.00	0.00	1.00	9.50	1.00	4000.00	221.00	10.10
0	28.10	0.30	40.00	0.00	0.00	1.00	9.50	1.00	4000.00	221.00	10.60
1	33.90	0.50	40.00	0.00	0.00	1.00	10.00	1.00	4000.00	228.00	42.10
0	37.80	0.50	40.00	0.00	0.00	1.00	10.00	1.00	4000.00	228.00	43.10
0	36.80	0.50	40.00	0.00	0.00	1.00	10.00	1.00	4000.00	228.00	30.20
0	38.00	0.50	40.00	0.00	0.00	1.00	10.00	1.00	4000.00	228.00	10.60
0	35.10	0.50	40.00	0.00	0.00	1.00	10.00	1.00	4000.00	228.00	10.50
1	37.20	0.60	40.00	0.00	0.00	1.00	10.00	1.00	4000.00	225.00	30.20
1	33.90	0.60	40.00	0.00	0.00	1.00	10.00	1.00	4000.00	225.00	42.10
0	37.60	0.60	40.00	0.00	0.00	1.00	10.00	1.00	4000.00	225.00	43.10
0	35.60	0.60	40.00	0.00	0.00	1.00	10.00	1.00	4000.00	225.00	34.30
0	38.20	0.60	40.00	0.00	0.00	1.00	10.00	1.00	4000.00	225.00	10.60
0	35.20	0.60	40.00	0.00	0.00	1.00	10.00	1.00	4000.00	225.00	10.50
1	27.70	0.70	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	224.00	43.10
1	28.20	0.80	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	224.00	10.60
0	27.30	0.80	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	224.00	30.20
1	25.60	0.80	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	224.00	34.30
0	30.30	0.80	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	224.00	38.10
0	31.40	0.80	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	224.00	42.50
0	31.80	0.80	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	224.00	8.10
0	30.40	0.80	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	224.00	10.10
0	25.20	0.80	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	224.00	10.50
1	15.10	1.00	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	222.00	10.50
1	18.00	1.00	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	222.00	43.10
1	20.20	1.00	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	222.00	10.10
1	15.80	1.00	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	222.00	34.30
0	13.80	1.00	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	222.00	42.10
0	20.20	1.00	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	222.00	38.10
0	17.30	1.00	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	222.00	30.20
0	21.40	1.00	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	222.00	42.50
0	21.70	1.00	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	222.00	8.10
0	18.10	1.00	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	222.00	10.60
1	11.60	1.20	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	217.00	42.50
1	4.00	1.20	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	217.00	42.10
1	8.10	1.20	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	217.00	10.60
1	10.30	1.20	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	217.00	38.10
0	7.70	1.20	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	217.00	30.20
0	7.60	1.20	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	217.00	43.10
0	5.90	1.20	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	217.00	34.30
0	11.70	1.20	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	217.00	8.10
0	10.40	1.20	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	217.00	10.10
0	5.20	1.20	40.00	0.00	0.00	1.00	11.00	1.00	4000.00	217.00	10.50
1	10.20	0.00	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	181.00	38.10
1	11.30	0.10	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	181.00	42.50
0	3.90	0.10	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	181.00	42.10
0	7.50	0.10	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	181.00	43.10

0	6.70	0.10	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	181.00	30.20
0	5.60	0.10	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	181.00	34.30
0	11.80	0.10	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	181.00	8.10
0	10.30	0.10	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	181.00	10.10
0	8.20	0.10	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	181.00	10.60
0	5.30	0.10	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	181.00	10.50
1	17.60	0.30	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	43.10
1	13.80	0.30	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	42.10
1	15.50	0.30	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	34.30
1	20.20	0.30	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	38.10
0	18.20	0.30	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	10.60
1	21.70	0.30	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	8.10
0	16.80	0.30	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	30.20
0	21.40	0.30	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	42.50
1	20.40	0.30	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	10.10
0	15.20	0.30	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	10.50
1	30.30	0.50	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	38.10
0	30.40	0.50	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	10.10
0	23.80	0.50	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	42.10
0	27.50	0.50	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	43.10
0	27.20	0.50	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	30.20
0	25.60	0.50	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	34.30
0	31.40	0.50	40.00	0.00	0.00	1.00	21.00	3.00	2000.00	240.00	42.50
0	32.00	0.50	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	8.10
1	28.20	0.50	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	10.60
0	25.20	0.50	40.00	0.00	0.00	1.00	18.00	2.50	2000.00	240.00	10.50
1	35.70	0.70	40.00	0.00	0.00	1.00	21.00	3.00	2000.00	225.00	34.30
0	34.00	0.80	40.00	0.00	0.00	1.00	21.00	3.00	2000.00	225.00	42.10
0	37.40	0.70	40.00	0.00	0.00	1.00	21.00	3.00	2000.00	225.00	43.10
0	37.20	0.80	40.00	0.00	0.00	1.00	21.00	3.00	2000.00	225.00	30.20
1	38.10	0.80	40.00	0.00	0.00	1.00	21.00	3.00	2000.00	225.00	10.60
0	35.30	0.80	40.00	0.00	0.00	1.00	21.00	3.00	2000.00	225.00	10.50
0	33.80	0.80	40.00	0.00	0.00	1.00	21.00	3.00	2000.00	225.00	42.10
0	37.40	0.80	40.00	0.00	0.00	1.00	21.00	3.00	2000.00	225.00	43.10
0	35.60	0.90	40.00	0.00	0.00	1.00	21.00	3.00	2000.00	225.00	34.30
0	38.20	0.80	40.00	0.00	0.00	1.00	21.00	3.00	2000.00	225.00	10.60
0	35.30	0.80	40.00	0.00	0.00	1.00	21.00	3.00	2000.00	225.00	10.50
1	30.60	1.00	40.00	0.00	0.00	1.00	20.00	3.50	2000.00	225.00	10.10
0	23.90	1.10	40.00	0.00	0.00	1.00	20.00	3.50	2000.00	225.00	42.10
0	27.60	1.10	40.00	0.00	0.00	1.00	20.00	3.50	2000.00	225.00	43.10
0	30.20	1.10	40.00	0.00	0.00	1.00	20.00	3.50	2000.00	225.00	38.10
0	25.60	1.10	40.00	0.00	0.00	1.00	20.00	3.50	2000.00	225.00	34.30
0	31.30	1.10	40.00	0.00	0.00	1.00	20.00	3.50	2000.00	225.00	42.50
0	31.90	1.10	40.00	0.00	0.00	1.00	20.00	3.50	2000.00	225.00	8.10
0	28.10	1.10	40.00	0.00	0.00	1.00	20.00	3.50	2000.00	225.00	10.60
0	25.30	1.10	40.00	0.00	0.00	1.00	20.00	3.50	2000.00	225.00	10.50
1	20.30	1.30	40.00	0.00	0.00	1.00	20.00	3.50	2000.00	230.00	10.10
1	18.20	1.30	40.00	0.00	0.00	1.00	20.00	3.50	2000.00	230.00	43.10
0	13.80	1.30	40.00	0.00	0.00	1.00	20.00	3.50	2000.00	230.00	42.10
0	20.30	1.30	40.00	0.00	0.00	1.00	20.00	3.50	2000.00	230.00	38.10
0	15.40	1.30	40.00	0.00	0.00	1.00	20.00	3.50	2000.00	230.00	34.30
0	21.40	1.30	40.00	0.00	0.00	1.00	20.00	3.50	2000.00	230.00	42.50
0	21.80	1.30	40.00	0.00	0.00	1.00	20.00	3.50	2000.00	230.00	8.10
0	18.20	1.30	40.00	0.00	0.00	1.00	20.00	3.50	2000.00	230.00	10.60
0	15.20	1.30	40.00	0.00	0.00	1.00	20.00	3.50	2000.00	230.00	10.50

CG2103   26 OCT 88   FLAR

1	4.10	0.10	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	225.00	30.20
1	1.00	0.10	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	225.00	39.10
1	3.10	0.10	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	225.00	10.50
1	5.10	0.10	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	225.00	34.30
0	0.70	0.10	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	225.00	8.10
0	7.10	0.10	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	225.00	42.10
1	5.90	0.10	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	225.00	10.10
0	3.40	0.10	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	225.00	43.10
1	0.80	0.20	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	247.00	34.30
1	2.50	0.20	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	247.00	43.10
1	1.30	0.30	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	247.00	42.10
1	4.90	0.30	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	247.00	38.10
1	6.40	0.30	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	247.00	8.10
0	1.90	0.30	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	247.00	30.20
0	2.80	0.30	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	247.00	10.50
0	0.00	0.30	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	247.00	10.10
1	4.70	0.40	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	216.00	42.10
1	8.00	0.40	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	216.00	30.20
1	6.00	0.50	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	216.00	10.10
1	8.50	0.50	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	216.00	43.10
1	12.50	0.50	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	216.00	8.10
0	11.00	0.50	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	216.00	38.10
0	6.80	0.50	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	216.00	34.30
0	8.80	0.50	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	216.00	10.50
1	14.40	0.60	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	250.00	43.10
1	11.90	0.60	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	250.00	10.10
1	12.80	0.60	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	250.00	34.30
1	14.20	0.70	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	250.00	30.20
1	16.90	0.70	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	250.00	38.10
0	10.60	0.70	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	250.00	42.10
0	18.40	0.70	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	250.00	8.10
0	14.80	0.70	20.00	0.00	0.00	1.00	0.00	0.00	2500.00	250.00	10.50
1	18.40	0.90	20.00	0.00	0.00	1.00	2.60	0.00	2500.00	213.00	34.30
0	16.70	0.90	20.00	0.00	0.00	1.00	2.60	0.00	2500.00	213.00	42.10
0	17.90	0.90	20.00	0.00	0.00	1.00	2.60	0.00	2500.00	213.00	10.10
1	18.50	1.00	20.00	0.00	0.00	1.00	2.60	0.00	4000.00	264.00	34.30
1	17.90	1.00	20.00	0.00	0.00	1.00	2.60	0.00	4000.00	264.00	10.10
0	19.30	1.00	20.00	0.00	0.00	1.00	2.60	0.00	4000.00	264.00	[illegible].20
1	12.50	1.20	20.00	0.00	0.00	1.00	2.60	0.00	4000.00	213.00	34.30
1	13.60	1.20	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	213.00	30.20
1	14.30	1.20	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	213.00	43.10
1	10.60	1.20	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	213.00	42.10
0	14.80	1.20	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	213.00	10.50
0	11.90	1.20	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	213.00	10.10
1	[illegible].50	1.40	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	260.00	34.30
1	4.70	1.40	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	260.00	42.10
1	5.90	1.40	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	260.00	10.10
1	8.40	1.40	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	260.00	43.10
1	7.80	1.40	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	260.00	30.20
0	10.90	1.40	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	260.00	38.10
0	12.40	1.40	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	260.00	8.10
0	8.70	1.40	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	260.00	10.50
1	1.80	1.60	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	213.00	30.20
1	0.50	1.60	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	213.00	34.30
1	1.40	1.60	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	213.00	42.10
1	4.90	1.60	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	213.00	38.10
0	2.60	1.60	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	213.00	43.10
0	6.50	1.60	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	213.00	8.10
0	2.80	1.60	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	213.00	10.50
0	0.10	1.60	20.00	0.00	0.00	1.00	3.40	0.00	4000.00	213.00	10.10
1	5.40	1.80	20.00	0.00	0.00	1.00	4.50	0.00	4000.00	260.00	34.30
1	3.30	1.80	20.00	0.00	0.00	1.00	4.50	0.00	4000.00	260.00	43.10

1	5.90	1.80	20.00	0.00	0.00	1.00	4.50	0.00	4000.00	260.00	10.10
1	7.30	1.80	20.00	0.00	0.00	1.00	4.50	0.00	4000.00	260.00	42.10
0	1.00	1.80	20.00	0.00	0.00	1.00	4.50	0.00	4000.00	260.00	38.10
0	4.10	1.80	20.00	0.00	0.00	1.00	4.50	0.00	4000.00	260.00	30.20
0	0.60	1.80	20.00	0.00	0.00	1.00	4.50	0.00	4000.00	260.00	8.10
0	3.10	1.80	20.00	0.00	0.00	1.00	4.50	0.00	4000.00	260.00	10.50
1	1.10	0.00	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	220.00	38.10
1	5.50	0.00	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	220.00	34.30
1	7.30	0.00	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	220.00	42.10
0	3.50	0.10	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	220.00	43.10
0	2.80	0.10	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	220.00	30.20
0	0.50	0.10	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	220.00	8.10
0	3.10	0.10	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	220.00	10.50
0	6.00	0.10	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	220.00	10.10
1	2.40	0.20	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	250.00	[illegible]
1	0.10	0.20	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	250.00	10.10
1	1.40	0.30	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	250.00	42.10
1	4.80	0.30	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	250.00	38.10
0	3.10	0.30	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	250.00	30.20
0	0.30	0.30	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	250.00	34.30
0	6.40	0.30	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	250.00	8.10
0	2.70	0.30	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	250.00	10.50
1	8.50	0.50	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	210.00	43.10
1	6.50	0.50	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	210.00	34.30
1	10.90	0.50	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	210.00	38.10
1	9.20	0.50	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	210.00	30.20
0	4.70	0.50	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	210.00	42.10
0	12.50	0.50	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	210.00	8.10
0	8.80	0.50	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	210.00	10.50
0	6.00	0.50	20.00	0.00	0.00	1.00	22.00	2.00	2500.00	210.00	10.10
1	16.90	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2500.00	260.00	38.10
0	10.70	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2500.00	260.00	42.10
0	14.30	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2500.00	260.00	43.10
0	15.00	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2500.00	260.00	30.20
0	12.50	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2500.00	260.00	34.30
0	18.50	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2500.00	260.00	8.10
0	14.70	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2500.00	260.00	10.50
0	12.00	0.70	20.00	0.00	0.00	1.00	16.00	2.50	2500.00	260.00	10.10
0	16.60	0.90	20.00	0.00	0.00	1.00	16.00	2.50	2500.00	210.00	42.10
0	18.40	0.90	20.00	0.00	0.00	1.00	16.00	2.50	2500.00	210.00	34.30
0	18.00	0.90	20.00	0.00	0.00	1.00	16.00	2.50	2500.00	210.00	10.10
0	16.40	1.00	20.00	0.00	0.00	1.00	17.00	2.50	4000.00	265.00	42.10
0	18.30	1.00	20.00	0.00	0.00	1.00	17.00	2.50	4000.00	265.00	34.30
0	[illegible]	1.00	20.00	0.00	0.00	1.00	17.00	2.50	4000.00	265.00	10.10
1	15.10	1.20	20.00	0.00	0.00	1.00	17.00	2.50	4000.00	212.00	30.20
1	14.50	1.20	20.00	0.00	0.00	1.00	17.00	2.50	4000.00	212.00	43.10
1	12.50	1.20	20.00	0.00	0.00	1.00	17.00	2.50	4000.00	212.00	34.30
0	10.60	1.20	20.00	0.00	0.00	1.00	17.00	2.50	4000.00	212.00	42.10
0	16.90	1.20	20.00	0.00	0.00	1.00	17.00	2.50	4000.00	212.00	38.10
0	18.40	1.20	20.00	0.00	0.00	1.00	17.00	2.50	4000.00	212.00	8.10
0	14.70	1.20	20.00	0.00	0.00	1.00	17.00	2.50	4000.00	212.00	10.50
0	12.00	1.20	20.00	0.00	0.00	1.00	17.00	2.50	4000.00	212.00	10.10
1	6.50	1.40	20.00	0.00	0.00	1.00	18.00	2.50	4000.00	265.00	34.30
1	4.60	1.40	20.00	0.00	0.00	1.00	18.00	2.50	4000.00	265.00	42.10
1	5.90	1.40	20.00	0.00	0.00	1.00	18.00	2.50	4000.00	265.00	10.10
1	10.80	1.40	20.00	0.00	0.00	1.00	18.00	2.50	4000.00	265.00	38.10
0	8.20	1.40	20.00	0.00	0.00	1.00	18.00	2.50	4000.00	265.00	43.10
0	9.20	1.40	20.00	0.00	0.00	1.00	18.00	2.50	4000.00	265.00	30.20
0	12.40	1.40	20.00	0.00	0.00	1.00	18.00	2.50	4000.00	265.00	8.10
0	8.80	1.40	20.00	0.00	0.00	1.00	18.00	2.50	4000.00	265.00	10.50
1	2.10	1.60	20.00	0.00	0.00	1.00	18.00	2.50	4000.00	215.00	43.10
0	3.10	1.60	20.00	0.00	0.00	1.00	18.00	2.50	4000.00	215.00	30.20
1	4.90	1.60	20.00	0.00	0.00	1.00	18.00	2.50	4000.00	215.00	38.10

0	1.40	1.60	20.00	0.00	0.00	1.00	18.00	2.50	4000.00	215.00	42.10
0	0.40	1.60	20.00	0.00	0.00	1.00	18.00	2.50	4000.00	215.00	34.30
0	6.40	1.60	20.00	0.00	0.00	1.00	18.00	2.50	4000.00	215.00	8.10
0	2.80	1.60	20.00	0.00	0.00	1.00	18.00	2.50	4000.00	215.00	10.50
0	0.00	1.60	20.00	0.00	0.00	1.00	18.00	2.50	4000.00	215.00	10.10

CS2103 28 OCT 88 FLAR 40 nmi RANGE SCALE

1	8.70	0.00	40.00	0.00	0.00	1.00	19.00	2.00	4000.00	215.00	30.20
1	7.60	0.00	40.00	0.00	0.00	1.00	19.00	2.00	4000.00	215.00	43.10
0	3.90	0.10	40.00	0.00	0.00	1.00	19.00	2.00	4000.00	215.00	42.10
0	10.00	0.10	40.00	0.00	0.00	1.00	19.00	2.00	4000.00	215.00	38.10
0	5.70	0.10	40.00	0.00	0.00	1.00	19.00	2.00	4000.00	215.00	34.30
0	11.80	0.10	40.00	0.00	0.00	1.00	19.00	2.00	4000.00	215.00	8.10
0	10.30	0.10	40.00	0.00	0.00	1.00	19.00	2.00	4000.00	215.00	10.50
0	8.00	0.10	40.00	0.00	0.00	1.00	19.00	2.00	4000.00	215.00	10.10
1	20.00	0.30	40.00	0.00	0.00	1.00	19.00	2.00	4000.00	258.00	38.10
1	13.90	0.30	40.00	0.00	0.00	1.00	19.00	2.00	4000.00	258.00	42.10
0	17.80	0.30	40.00	0.00	0.00	1.00	19.00	2.00	4000.00	258.00	43.10
0	18.60	0.30	40.00	0.00	0.00	1.00	19.00	2.00	4000.00	258.00	30.20
0	15.60	0.30	40.00	0.00	0.00	1.00	19.00	2.00	4000.00	258.00	34.30
0	21.70	0.30	40.00	0.00	0.00	1.00	19.00	2.00	4000.00	258.00	8.10
0	20.30	0.30	40.00	0.00	0.00	1.00	19.00	2.00	4000.00	258.00	10.50
0	18.10	0.30	40.00	0.00	0.00	1.00	19.00	2.00	4000.00	258.00	10.10
0	25.70	0.50	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	210.00	34.30
1	23.90	0.50	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	210.00	42.10
1	27.90	0.50	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	210.00	43.10
1	30.10	0.40	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	210.00	38.10
0	28.80	0.50	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	210.00	30.20
0	31.80	0.50	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	210.00	8.10
0	30.40	0.50	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	210.00	10.50
0	28.20	0.50	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	210.00	10.10
0	35.60	0.70	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	260.00	34.30
1	33.80	0.70	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	260.00	42.10
0	37.60	0.70	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	260.00	43.10
0	38.60	0.70	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	260.00	30.20
0	38.00	0.70	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	260.00	10.10
0	40.00	0.70	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	260.00	38.10
1	33.80	0.90	40.00	1.00	0.00	1.00	20.00	2.50	4000.00	207.00	42.10
0	38.00	0.90	40.00	1.00	0.00	1.00	20.00	2.50	4000.00	207.00	43.10
0	38.80	0.80	40.00	1.00	0.00	1.00	20.00	2.50	4000.00	207.00	30.20
0	35.70	0.90	40.00	1.00	0.00	1.00	20.00	2.50	4000.00	207.00	34.30
0	38.20	0.80	40.00	1.00	0.00	1.00	20.00	2.50	4000.00	207.00	10.10
1	23.90	1.10	40.00	1.00	0.00	1.00	20.00	2.50	4000.00	260.00	42.10
0	27.80	1.10	40.00	1.00	0.00	1.00	20.00	2.50	4000.00	260.00	43.10
0	30.10	1.10	40.00	1.00	0.00	1.00	20.00	2.50	4000.00	260.00	38.10
0	28.90	1.10	40.00	1.00	0.00	1.00	20.00	2.50	4000.00	260.00	30.20
0	25.80	1.10	40.00	1.00	0.00	1.00	20.00	2.50	4000.00	260.00	34.30
0	31.90	1.10	40.00	1.00	0.00	1.00	20.00	2.50	4000.00	260.00	8.10
0	30.30	1.10	40.00	1.00	0.00	1.00	20.00	2.50	4000.00	260.00	10.50
0	28.10	1.10	40.00	1.00	0.00	1.00	20.00	2.50	4000.00	260.00	10.10
0	20.10	1.30	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	207.00	38.10
1	13.90	1.20	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	207.00	42.10
0	18.00	1.30	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	207.00	43.10
0	18.90	1.30	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	207.00	30.20
0	15.70	1.30	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	207.00	34.30
0	21.80	1.30	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	207.00	8.10
0	20.30	1.30	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	207.00	10.50
0	18.10	1.30	40.00	0.00	0.00	1.00	20.00	2.50	4000.00	207.00	10.10
1	7.80	1.50	40.00	0.00	0.00	1.00	21.00	3.00	4000.00	260.00	43.10
1	10.00	1.50	40.00	0.00	0.00	1.00	21.00	3.00	4000.00	260.00	38.10
1	3.90	1.50	40.00	0.00	0.00	1.00	21.00	3.00	4000.00	260.00	42.10
0	8.80	1.50	40.00	0.00	0.00	1.00	21.00	3.00	4000.00	260.00	[illegible]
0	5.70	1.50	40.00	0.00	0.00	1.00	21.00	3.00	4000.00	260.00	34.30
0	11.80	1.50	40.00	0.00	0.00	1.00	21.00	3.00	4000.00	260.00	8.10
0	10.20	1.50	40.00	0.00	0.00	1.00	21.00	3.00	4000.00	260.00	10.50
0	8.10	1.50	40.00	0.00	0.00	1.00	21.00	3.00	4000.00	260.00	10.10
1	7.60	0.00	40.00	0.00	0.00	1.00	20.00	3.50	4000.00	200.00	43.10
0	3.90	0.10	40.00	0.00	0.00	1.00	20.00	3.50	4000.00	200.00	42.10
0	10.10	0.10	40.00	0.00	0.00	1.00	20.00	3.50	4000.00	200.00	38.10

0	8.80	0.10	40.00	0.00	0.00	1.00	20.00	3.50	4000.00	200.00	30.20
0	5.80	0.10	40.00	0.00	0.00	1.00	20.00	3.50	4000.00	200.00	34.30
0	11.80	0.10	40.00	0.00	0.00	1.00	20.00	3.50	4000.00	200.00	8.10
0	10.40	0.10	40.00	0.00	0.00	1.00	20.00	3.50	4000.00	200.00	10.50
0	8.10	0.10	40.00	0.00	0.00	1.00	20.00	3.50	4000.00	200.00	10.10
1	13.90	0.30	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	276.00	42.10
1	18.20	0.30	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	276.00	43.10
1	18.80	0.30	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	276.00	30.20
0	20.00	0.30	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	276.00	38.10
0	15.70	0.30	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	276.00	34.30
0	21.70	0.30	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	276.00	8.10
0	20.30	0.30	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	276.00	10.50
0	18.00	0.30	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	276.00	10.10
0	23.90	0.50	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	298.00	42.10
0	27.80	0.50	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	298.00	43.10
0	30.00	0.50	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	298.00	38.10
0	29.20	0.50	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	298.00	30.20
0	25.80	0.50	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	298.00	34.30
0	31.80	0.50	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	298.00	8.10
0	30.30	0.50	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	298.00	10.50
0	28.10	0.50	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	298.00	10.10
1	33.90	0.70	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	277.00	42.10
1	35.70	0.70	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	277.00	34.30
0	38.00	0.70	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	277.00	43.10
0	39.50	0.70	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	277.00	30.20
0	37.90	0.70	40.00	0.00	0.00	1.00	21.00	3.50	4000.00	277.00	10.10

CG2101 03 OCT 88 SLAR

1	3.40	0.10	20.00	15.00	1.50	2500.00	234.00	37.10
0	4.70	0.10	20.00	15.00	1.50	2500.00	234.00	23.10
0	3.90	0.10	20.00	15.00	1.50	2500.00	234.00	30.10
0	2.50	0.10	20.00	15.00	1.50	2500.00	234.00	10.60
0	1.80	0.10	20.00	15.00	1.50	2500.00	234.00	10.50
0	4.80	0.10	20.00	15.00	1.50	2500.00	234.00	8.10
1	2.50	0.30	20.00	15.00	1.50	2500.00	240.00	37.10
1	3.50	0.30	20.00	15.00	1.50	2500.00	240.00	10.60
0	2.00	0.30	20.00	15.00	1.50	2500.00	240.00	30.10
0	1.10	0.30	20.00	15.00	1.50	2500.00	240.00	23.10
0	4.10	0.30	20.00	15.00	1.50	2500.00	240.00	10.50
0	1.10	0.30	20.00	15.00	1.50	2500.00	240.00	8.10
1	8.30	0.50	20.00	15.00	1.50	2500.00	240.00	37.10
1	6.80	0.50	20.00	15.00	1.50	2500.00	240.00	23.10
0	10.00	0.50	20.00	15.00	1.50	2500.00	240.00	10.50
1	12.00	0.50	20.00	15.00	1.50	2500.00	240.00	10.10
0	8.10	0.50	20.00	15.00	1.50	2500.00	240.00	30.10
0	9.50	0.50	20.00	15.00	1.50	2500.00	240.00	10.60
0	7.20	0.50	20.00	15.00	1.50	2500.00	240.00	8.10
0	18.00	0.60	20.00	15.00	1.50	2500.00	240.00	10.10
1	12.80	0.70	20.00	15.00	1.50	2500.00	240.00	23.10
1	16.10	0.70	20.00	15.00	1.50	2500.00	240.00	10.50
1	14.00	0.70	20.00	15.00	1.50	2500.00	240.00	37.10
1	15.40	0.70	20.00	15.00	1.50	2500.00	240.00	10.60
0	13.80	0.70	20.00	15.00	1.50	2500.00	240.00	30.10
0	13.00	0.70	20.00	15.00	1.50	2500.00	240.00	8.10
0	18.70	0.70	20.00	14.00	1.50	2500.00	240.00	23.10
0	19.90	0.70	20.00	14.00	1.50	2500.00	240.00	37.10
0	19.10	0.70	20.00	14.00	1.50	2500.00	240.00	8.10
1	15.10	0.90	20.00	14.00	1.50	2500.00	240.00	30.20
1	13.80	0.90	20.00	14.00	1.50	2500.00	240.00	37.10
1	14.10	0.90	20.00	14.00	1.50	2500.00	240.00	30.10
1	16.30	0.90	20.00	14.00	1.50	2500.00	240.00	42.10
0	12.80	0.90	20.00	14.00	1.50	2500.00	240.00	23.10
1	15.50	0.90	20.00	14.00	1.50	2500.00	240.00	10.60
0	16.10	0.90	20.00	14.00	1.50	2500.00	240.00	10.50
0	13.10	0.90	20.00	14.00	1.50	2500.00	240.00	8.10
0	18.10	0.90	20.00	14.00	1.50	2500.00	240.00	10.10
1	8.00	1.10	20.00	14.00	1.50	2500.00	240.00	30.10
1	7.00	1.10	20.00	14.00	1.50	2500.00	240.00	23.10
1	7.60	1.10	20.00	14.00	1.50	2500.00	240.00	37.10
1	9.40	1.10	20.00	14.00	1.50	2500.00	240.00	10.60
1	9.00	1.10	20.00	14.00	1.50	2500.00	240.00	30.20
1	10.20	1.10	20.00	14.00	1.50	2500.00	240.00	42.10
0	10.10	1.10	20.00	14.00	1.50	2500.00	240.00	10.50
1	7.10	1.10	20.00	14.00	1.50	2500.00	240.00	8.10
0	12.10	1.10	20.00	14.00	1.50	2500.00	240.00	10.10
1	2.90	1.30	20.00	14.00	1.50	2500.00	230.00	30.20
1	4.20	1.40	20.00	14.00	1.50	2500.00	230.00	10.50
1	4.20	1.40	20.00	14.00	1.50	2500.00	230.00	42.10
0	1.00	1.40	20.00	14.00	1.50	2500.00	230.00	23.10
1	2.00	1.40	20.00	14.00	1.50	2500.00	230.00	30.10
0	1.60	1.30	20.00	14.00	1.50	2500.00	230.00	37.10
0	3.50	1.30	20.00	14.00	1.50	2500.00	230.00	10.60
0	1.20	1.40	20.00	14.00	1.50	2500.00	230.00	8.10
0	6.10	1.40	20.00	14.00	1.50	2500.00	230.00	10.10
1	1.80	1.50	20.00	8.00	1.50	2500.00	230.00	42.10
0	4.90	1.50	20.00	8.00	1.50	2500.00	230.00	23.10
0	4.00	1.50	20.00	8.00	1.50	2500.00	230.00	30.10
0	4.50	1.50	20.00	8.00	1.50	2500.00	230.00	37.10
0	3.30	1.60	20.00	8.00	1.50	2500.00	230.00	30.20
0	2.50	1.50	20.00	8.00	1.50	2500.00	230.00	10.60

0	1.80	1.50	20.00	8.00	1.50	2500.00	230.00	10.50
0	4.80	1.50	20.00	8.00	1.50	2500.00	230.00	8.10
1	2.90	0.10	20.00	7.50	1.00	4000.00	254.00	30.20
1	3.00	0.10	20.00	7.50	1.00	4000.00	254.00	37.10
0	5.20	0.10	20.00	7.50	1.00	4000.00	254.00	23.10
0	3.80	0.10	20.00	7.50	1.00	4000.00	254.00	30.10
0	8.70	0.10	20.00	7.50	1.00	4000.00	254.00	42.50
0	2.40	0.10	20.00	7.50	1.00	4000.00	254.00	10.60
0	1.70	0.10	20.00	7.50	1.00	4000.00	254.00	10.50
0	4.60	0.10	20.00	7.50	1.00	4000.00	254.00	8.10
1	13.10	0.10	20.00	7.50	1.00	4000.00	254.00	23.10
1	13.10	0.10	20.00	7.50	1.00	4000.00	254.00	8.10
1	15.20	0.10	20.00	7.50	1.00	4000.00	254.00	37.10
1	16.10	0.10	20.00	7.50	1.00	4000.00	254.00	10.60
1	14.50	0.10	20.00	7.50	1.00	4000.00	254.00	30.10
0	17.70	0.10	20.00	7.50	1.00	4000.00	254.00	42.10
0	15.20	0.10	20.00	7.50	1.00	4000.00	254.00	30.20
0	9.40	0.10	20.00	7.50	1.00	4000.00	254.00	42.50
1	15.50	0.10	20.00	7.50	1.00	4000.00	254.00	10.60
0	18.10	0.10	20.00	7.50	1.00	4000.00	254.00	10.10
0	19.20	0.30	20.00	7.50	1.00	4000.00	254.00	23.10
0	15.50	0.30	20.00	7.50	1.00	4000.00	254.00	42.50
0	19.10	0.30	20.00	7.50	1.00	4000.00	254.00	8.10
1	4.30	0.70	20.00	6.30	1.00	4000.00	254.00	42.50
1	8.60	0.70	20.00	6.30	1.00	4000.00	254.00	30.10
0	11.30	0.70	20.00	6.30	1.00	4000.00	254.00	42.10
0	7.20	0.70	20.00	6.30	1.00	4000.00	254.00	23.10
1	9.60	0.70	20.00	6.30	1.00	4000.00	254.00	37.10
0	9.60	0.70	20.00	6.30	1.00	4000.00	254.00	30.20
0	9.40	0.70	20.00	6.30	1.00	4000.00	254.00	10.60
1	10.10	0.70	20.00	6.30	1.00	4000.00	254.00	10.50
0	7.10	0.70	20.00	6.30	1.00	4000.00	254.00	8.10
0	12.10	0.70	20.00	6.30	1.00	4000.00	254.00	10.10
1	4.20	0.90	20.00	6.30	1.00	4000.00	254.00	10.50
1	3.50	0.90	20.00	6.30	1.00	4000.00	254.00	10.60
0	5.20	0.90	20.00	6.30	1.00	4000.00	254.00	42.10
0	1.20	0.90	20.00	6.30	1.00	4000.00	254.00	23.10
0	2.60	0.90	20.00	6.30	1.00	4000.00	254.00	30.10
0	3.90	0.90	20.00	6.30	1.00	4000.00	254.00	37.10
0	3.80	0.90	20.00	6.30	1.00	4000.00	254.00	30.20
0	1.90	0.90	20.00	6.30	1.00	4000.00	254.00	42.50
0	1.10	0.90	20.00	6.30	1.00	4000.00	254.00	8.10
0	6.10	0.90	20.00	6.30	1.00	4000.00	254.00	10.10
1	7.40	1.10	20.00	6.30	1.00	4000.00	254.00	42.50
1	3.30	1.10	20.00	6.30	1.00	4000.00	254.00	30.10
1	4.70	1.10	20.00	6.30	1.00	4000.00	254.00	23.10
0	1.90	1.10	20.00	6.30	1.00	4000.00	254.00	37.10
0	2.10	1.10	20.00	6.30	1.00	4000.00	254.00	30.20
0	2.50	1.10	20.00	6.30	1.00	4000.00	254.00	10.60
0	1.80	1.10	20.00	6.30	1.00	4000.00	254.00	10.50
0	4.80	1.10	20.00	6.30	1.00	4000.00	254.00	8.10

CG2101 05 OCT 88 SLAR

0	5.20	0.10	20.00	2.00	1.00	5000.00	218.00	23.10
0	6.60	0.10	20.00	2.00	1.00	5000.00	218.00	37.10
0	3.00	0.10	20.00	2.00	1.00	5000.00	218.00	42.50
0	3.90	0.10	20.00	2.00	1.00	5000.00	218.00	30.10
0	5.30	0.10	20.00	2.00	1.00	5000.00	218.00	30.20
0	0.90	0.10	20.00	2.00	1.00	5000.00	218.00	10.50
0	2.80	0.10	20.00	2.00	1.00	5000.00	218.00	8.10
0	4.80	0.10	20.00	2.00	1.00	5000.00	218.00	10.10
0	2.10	0.10	20.00	2.00	1.00	5000.00	218.00	10.60
1	3.00	0.20	20.00	2.40	1.00	5000.00	240.00	42.50
1	6.70	0.20	20.00	2.40	1.00	5000.00	240.00	42.10
1	2.20	0.20	20.00	2.40	1.00	5000.00	240.00	30.10
1	5.00	0.20	20.00	2.40	1.00	5000.00	240.00	10.50
0	3.10	0.20	20.00	2.40	1.00	5000.00	240.00	8.10
0	1.20	0.20	20.00	2.40	1.00	5000.00	240.00	10.10
0	3.90	0.30	20.00	2.40	1.00	5000.00	240.00	10.60
0	9.90	0.50	20.00	2.40	1.00	5000.00	220.00	10.60
0	8.80	0.50	20.00	2.40	1.00	5000.00	220.00	42.50
1	5.20	0.50	20.00	2.40	1.00	5000.00	220.00	37.10
1	12.60	0.50	20.00	2.40	1.00	5000.00	220.00	42.10
0	6.80	0.50	20.00	2.40	1.00	5000.00	220.00	23.10
1	7.90	0.50	20.00	2.40	1.00	5000.00	220.00	30.10
0	6.40	0.50	20.00	2.40	1.00	5000.00	220.00	30.20
0	11.00	0.50	20.00	2.40	1.00	5000.00	220.00	10.50
1	9.10	0.50	20.00	2.40	1.00	5000.00	220.00	8.10
0	7.20	0.50	20.00	2.40	1.00	5000.00	220.00	10.10
0	14.10	0.60	20.00	2.40	1.00	5000.00	246.00	30.10
0	17.10	0.60	20.00	2.40	1.00	5000.00	246.00	10.50
1	13.20	0.70	20.00	2.40	1.00	5000.00	246.00	10.10
0	12.80	0.70	20.00	2.40	1.00	5000.00	246.00	23.10
0	18.50	0.70	20.00	2.40	1.00	5000.00	246.00	42.10
1	11.10	0.70	20.00	2.40	1.00	5000.00	246.00	37.10
0	12.30	0.70	20.00	2.40	1.00	5000.00	246.00	30.20
1	14.80	0.60	20.00	2.40	1.00	5000.00	246.00	42.50
0	15.20	0.60	20.00	2.40	1.00	5000.00	246.00	8.10
1	15.80	0.70	20.00	2.40	1.00	5000.00	246.00	10.60
0	18.80	0.90	20.00	8.50	1.00	5000.00	246.00	23.10
1	17.30	0.90	20.00	8.50	1.00	5000.00	246.00	37.10
0	18.20	0.90	20.00	8.50	1.00	5000.00	246.00	30.20
1	17.10	1.00	20.00	11.00	1.00	4000.00	242.00	37.10
1	18.90	1.00	20.00	11.00	1.00	4000.00	242.00	23.10
0	19.20	1.00	20.00	11.00	1.00	4000.00	242.00	10.10
1	18.00	1.00	20.00	11.00	1.00	4000.00	242.00	30.20
1	11.90	1.20	20.00	10.00	1.00	4000.00	242.00	30.20
1	15.90	1.20	20.00	10.00	1.00	4000.00	242.00	10.60
1	13.00	1.20	20.00	10.00	1.00	4000.00	242.00	23.10
1	15.10	1.20	20.00	10.00	1.00	4000.00	242.00	8.10
0	14.30	1.20	20.00	10.00	1.00	4000.00	242.00	30.10
0	18.30	1.20	20.00	10.00	1.00	4000.00	242.00	42.10
0	11.20	1.20	20.00	10.00	1.00	4000.00	242.00	37.10
0	15.10	1.20	20.00	10.00	1.00	4000.00	242.00	42.50
0	17.00	1.20	20.00	10.00	1.00	4000.00	242.00	10.50
0	13.10	1.20	20.00	10.00	1.00	4000.00	242.00	10.10
1	9.10	1.40	20.00	10.00	1.00	4500.00	242.00	42.50
1	5.60	1.40	20.00	10.00	1.00	4500.00	242.00	37.10
1	7.20	1.40	20.00	10.00	1.00	4500.00	242.00	10.10
0	12.40	1.40	20.00	10.00	1.00	4500.00	247.00	42.10
1	7.20	1.40	20.00	10.00	1.00	4500.00	247.00	23.10
0	8.20	1.40	20.00	10.00	1.00	4500.00	247.00	30.10
0	6.00	1.40	20.00	10.00	1.00	4500.00	247.00	30.20
0	11.10	1.40	20.00	10.00	1.00	4500.00	247.00	10.50
0	9.10	1.40	20.00	10.00	1.00	4500.00	247.00	8.10

0	9.90	1.40	20.00	10.00	1.00	4500.00	247.00	10.60
1	3.10	1.60	20.00	11.00	1.00	4000.00	221.00	42.50
1	3.00	1.60	20.00	11.00	1.00	4000.00	221.00	8.10
0	6.20	1.60	20.00	11.00	1.00	4000.00	221.00	42.10
0	1.10	1.60	20.00	11.00	1.00	4000.00	221.00	23.10
0	2.20	1.60	20.00	11.00	1.00	4000.00	221.00	30.10
0	3.80	1.60	20.00	11.00	1.00	4000.00	221.00	10.60
0	5.00	1.60	20.00	11.00	1.00	4000.00	221.00	10.50
0	1.10	1.60	20.00	11.00	1.00	4000.00	221.00	10.10
1	3.90	1.80	20.00	11.00	1.00	4000.00	241.00	10.10
1	5.90	1.80	20.00	11.00	1.00	4000.00	241.00	37.10
1	1.10	1.80	20.00	11.00	1.00	4000.00	241.00	42.10
1	2.10	1.80	20.00	11.00	1.00	4000.00	241.00	42.50
0	3.90	1.80	20.00	11.00	1.00	4000.00	241.00	23.10
0	3.50	1.80	20.00	11.00	1.00	4000.00	241.00	30.10
0	5.20	1.80	20.00	11.00	1.00	4000.00	241.00	30.20
0	2.20	1.80	20.00	11.00	1.00	4000.00	241.00	8.10
0	1.10	1.80	20.00	11.00	1.00	4000.00	241.00	10.60

CG2101 07 OCT 88 SLAR

1	4.90	0.00	20.00	14.00	2.00	2500.00	242.00	10.10
1	4.70	0.10	20.00	14.00	2.00	2500.00	242.00	30.10
1	2.70	0.10	20.00	14.00	2.00	2500.00	242.00	8.10
0	1.10	0.00	20.00	14.00	2.00	2500.00	242.00	10.60
0	4.50	0.10	20.00	14.00	2.00	2500.00	242.00	10.50
0	1.80	0.10	20.00	14.00	2.00	2500.00	242.00	42.10
0	5.20	0.00	20.00	14.00	2.00	2500.00	242.00	23.10
0	3.10	0.10	20.00	14.00	2.00	2500.00	242.00	37.10
0	3.00	0.10	20.00	14.00	2.00	2500.00	242.00	30.20
0	2.40	0.10	20.00	14.00	2.00	2500.00	242.00	25.10
0	1.50	0.00	20.00	14.00	2.00	2500.00	242.00	43.10
1	4.80	0.20	20.00	14.00	2.00	2500.00	242.00	10.60
0	4.10	0.20	20.00	14.00	2.00	2500.00	242.00	42.10
0	0.60	0.20	20.00	14.00	2.00	2500.00	242.00	23.10
0	1.20	0.20	20.00	14.00	2.00	2500.00	242.00	30.10
0	2.80	0.20	20.00	14.00	2.00	2500.00	242.00	37.10
0	2.90	0.20	20.00	14.00	2.00	2500.00	242.00	30.20
0	3.50	0.20	20.00	14.00	2.00	2500.00	242.00	25.10
0	4.40	0.20	20.00	14.00	2.00	2500.00	242.00	43.10
0	1.00	0.20	20.00	14.00	2.00	2500.00	242.00	10.10
0	1.40	0.20	20.00	14.00	2.00	2500.00	242.00	10.50
0	3.20	0.20	20.00	14.00	2.00	2500.00	242.00	8.10
1	8.80	0.50	20.00	16.00	2.00	2500.00	243.00	30.20
0	10.10	0.50	20.00	16.00	2.00	2500.00	243.00	42.10
0	6.60	0.50	20.00	16.00	2.00	2500.00	243.00	23.10
0	7.30	0.50	20.00	16.00	2.00	2500.00	243.00	30.10
0	8.70	0.50	20.00	16.00	2.00	2500.00	243.00	37.10
0	9.50	0.50	20.00	16.00	2.00	2500.00	243.00	25.10
0	10.50	0.50	20.00	16.00	2.00	2500.00	243.00	43.10
0	10.80	0.50	20.00	16.00	2.00	2500.00	243.00	10.60
0	7.10	0.50	20.00	16.00	2.00	2500.00	243.00	10.10
0	7.40	0.50	20.00	16.00	2.00	2500.00	243.00	10.50
0	9.20	0.50	20.00	16.00	2.00	2500.00	243.00	8.10
0	16.10	0.60	20.00	16.00	2.00	2500.00	243.00	42.10
0	12.50	0.70	20.00	16.00	2.00	2500.00	243.00	23.10
0	13.20	0.60	20.00	16.00	2.00	2500.00	243.00	30.10
0	14.80	0.60	20.00	16.00	2.00	2500.00	243.00	37.10
0	14.60	0.60	20.00	16.00	2.00	2500.00	243.00	30.20
0	15.50	0.60	20.00	16.00	2.00	2500.00	243.00	25.10
0	16.50	0.70	20.00	16.00	2.00	2500.00	243.00	43.10
0	16.80	0.70	20.00	16.00	2.00	2500.00	243.00	10.60
0	13.00	0.70	20.00	16.00	2.00	2500.00	243.00	10.10
0	13.40	0.60	20.00	16.00	2.00	2500.00	243.00	10.50
0	15.20	0.60	20.00	16.00	2.00	2500.00	243.00	8.10
1	18.40	0.90	20.00	16.00	2.00	2500.00	243.00	10.10
1	17.80	0.90	20.00	16.00	2.00	2500.00	243.00	23.10
0	18.50	0.90	20.00	16.00	2.00	2500.00	243.00	30.10
0	19.90	0.90	20.00	16.00	2.00	2500.00	243.00	30.20
0	18.70	0.90	20.00	16.00	2.00	2500.00	243.00	10.50
1	18.80	0.90	20.00	15.00	2.50	2500.00	215.00	10.10
0	19.10	0.90	20.00	15.00	2.50	2500.00	215.00	30.10
0	19.30	0.90	20.00	15.00	2.50	2500.00	215.00	10.50
0	18.00	0.90	20.00	15.00	2.50	2500.00	215.00	23.10
1	16.80	1.10	20.00	14.00	2.50	2500.00	247.00	10.60
1	12.20	1.10	20.00	14.00	2.50	2500.00	247.00	23.10
0	16.10	1.20	20.00	14.00	2.50	2500.00	247.00	42.10
0	13.20	1.20	20.00	14.00	2.50	2500.00	247.00	30.10
0	14.60	1.20	20.00	14.00	2.50	2500.00	247.00	37.10
0	15.00	1.20	20.00	14.00	2.50	2500.00	247.00	30.20
0	15.50	1.20	20.00	14.00	2.50	2500.00	247.00	25.10
0	16.40	1.10	20.00	14.00	2.50	2500.00	247.00	43.10
0	17.70	1.20	20.00	14.00	2.50	2500.00	247.00	42.50

0	12.90	1.10	20.00	14.00	2.50	2500.00	247.00	10.10
0	13.40	1.20	20.00	14.00	2.50	2500.00	247.00	10.50
0	15.30	1.20	20.00	14.00	2.50	2500.00	247.00	8.10
1	7.00	1.30	20.00	14.00	2.50	2500.00	240.00	10.50
1	5.80	1.30	20.00	14.00	2.50	2500.00	240.00	23.10
1	9.90	1.30	20.00	14.00	2.50	2500.00	240.00	43.10
1	10.50	1.30	20.00	14.00	2.50	2500.00	240.00	10.60
0	9.70	1.30	20.00	14.00	2.50	2500.00	240.00	42.10
0	6.90	1.30	20.00	14.00	2.50	2500.00	240.00	30.10
0	8.50	1.30	20.00	14.00	2.50	2500.00	240.00	37.10
0	8.90	1.30	20.00	14.00	2.50	2500.00	240.00	30.20
0	9.00	1.30	20.00	14.00	2.50	2500.00	240.00	25.10
0	11.30	1.30	20.00	14.00	2.50	2500.00	240.00	42.50
0	6.60	1.30	20.00	14.00	2.50	2500.00	240.00	10.10
0	8.80	1.30	20.00	14.00	2.50	2500.00	240.00	8.10
1	4.90	1.60	20.00	14.00	2.50	2500.00	240.00	10.60
1	3.60	1.60	20.00	14.00	2.50	2500.00	240.00	30.20
0	4.10	1.60	20.00	14.00	2.50	2500.00	240.00	42.10
0	3.20	1.60	20.00	14.00	2.50	2500.00	240.00	25.10
0	2.70	1.60	20.00	14.00	2.50	2500.00	240.00	37.10
0	3.20	1.60	20.00	14.00	2.50	2500.00	240.00	25.10
0	4.40	1.60	20.00	14.00	2.50	2500.00	240.00	43.10
0	5.70	1.60	20.00	14.00	2.50	2500.00	240.00	42.50
0	1.10	1.60	20.00	14.00	2.50	2500.00	240.00	10.10
0	1.40	1.60	20.00	14.00	2.50	2500.00	240.00	10.50
0	3.30	1.60	20.00	14.00	2.50	2500.00	240.00	8.10
1	1.50	1.80	20.00	14.00	2.50	2500.00	240.00	43.10
1	2.80	1.70	20.00	14.00	2.50	2500.00	240.00	25.10
1	1.90	1.70	20.00	14.00	2.50	2500.00	240.00	42.10
0	3.40	1.70	20.00	14.00	2.50	2500.00	240.00	37.10
0	4.70	1.70	20.00	14.00	2.50	2500.00	240.00	30.10
0	2.30	1.70	20.00	14.00	2.50	2500.00	240.00	30.20
0	2.70	1.70	20.00	14.00	2.50	2500.00	240.00	8.10
0	6.00	1.70	20.00	14.00	2.50	2500.00	240.00	23.10
0	1.10	1.80	20.00	14.00	2.50	2500.00	240.00	10.60
0	4.90	1.80	20.00	14.00	2.50	2500.00	240.00	10.10
0	4.50	1.70	20.00	14.00	2.50	2500.00	240.00	10.50
1	1.00	0.00	20.00	15.00	2.50	4000.00	239.00	10.60
1	2.40	0.10	20.00	15.00	2.50	4000.00	239.00	25.10
0	1.10	0.10	20.00	15.00	2.50	4000.00	239.00	42.10
0	5.60	0.00	20.00	15.00	2.50	4000.00	239.00	23.10
0	4.60	0.10	20.00	15.00	2.50	4000.00	239.00	30.10
0	3.10	0.10	20.00	15.00	2.50	4000.00	239.00	37.10
0	2.50	0.10	20.00	15.00	2.50	4000.00	239.00	30.20
0	1.40	0.00	20.00	15.00	2.50	4000.00	239.00	43.10
0	4.80	0.00	20.00	15.00	2.50	4000.00	239.00	10.10
0	4.50	0.10	20.00	15.00	2.50	4000.00	239.00	10.50
0	2.70	0.10	20.00	15.00	2.50	4000.00	239.00	8.10
1	4.60	0.20	20.00	15.00	2.50	4000.00	217.00	42.10
1	2.60	0.20	20.00	15.00	2.50	4000.00	217.00	37.10
1	3.30	0.20	20.00	15.00	2.50	4000.00	217.00	25.10
1	3.00	0.20	20.00	15.00	2.50	4000.00	217.00	8.10
0	1.10	0.20	20.00	15.00	2.50	4000.00	217.00	30.10
0	2.90	0.20	20.00	15.00	2.50	4000.00	217.00	30.20
0	4.10	0.20	20.00	15.00	2.50	4000.00	217.00	43.10
0	5.20	0.20	20.00	15.00	2.50	4000.00	217.00	42.50
0	4.50	0.20	20.00	15.00	2.50	4000.00	217.00	10.60
0	1.20	0.20	20.00	15.00	2.50	4000.00	217.00	10.50
1	6.40	0.50	20.00	15.00	2.50	2500.00	243.00	23.10
1	7.30	0.50	20.00	15.00	2.50	2500.00	243.00	10.10
1	10.80	0.50	20.00	15.00	2.50	2500.00	243.00	43.10
1	9.40	0.50	20.00	15.00	2.50	2500.00	243.00	30.20
1	9.50	0.50	20.00	15.00	2.50	2500.00	243.00	8.10

1	8.80	0.50	20.00	15.00	2.50	2500.00	243.00	37.10
0	11.50	0.50	20.00	15.00	2.50	2500.00	243.00	42.50
0	10.40	0.50	20.00	15.00	2.50	2500.00	243.00	42.00
0	10.70	0.50	20.00	15.00	2.50	2500.00	243.00	30.10
0	7.80	0.50	20.00	15.00	2.50	2500.00	243.00	10.50
1	14.40	0.70	20.00	16.00	2.50	2000.00	194.00	37.10
1	15.90	0.70	20.00	16.00	2.50	2000.00	194.00	42.10
1	14.70	0.70	20.00	16.00	2.50	2000.00	194.00	8.10
1	13.00	0.70	20.00	16.00	2.50	2000.00	194.00	10.50
1	12.70	0.70	20.00	16.00	2.50	2000.00	194.00	30.10
1	15.00	0.70	20.00	16.00	2.50	2000.00	194.00	25.10
1	15.90	0.70	20.00	16.00	2.50	2000.00	194.00	43.10
1	11.80	0.70	20.00	16.00	2.50	2000.00	194.00	23.10
0	14.40	0.70	20.00	16.00	2.50	2000.00	194.00	30.20
1	17.10	0.70	20.00	16.00	2.50	2000.00	194.00	42.50
0	12.50	0.70	20.00	16.00	2.50	2000.00	194.00	10.10
1	17.90	0.90	20.00	16.00	2.50	2500.00	235.00	23.10
0	19.30	1.00	20.00	16.00	2.50	2500.00	235.00	30.10
0	19.50	1.00	20.00	16.00	2.50	2500.00	235.00	10.50
0	19.00	0.90	20.00	16.00	2.50	2500.00	235.00	10.10
1	19.10	1.00	20.00	14.00	2.50	2500.00	197.00	10.50
1	18.60	1.00	20.00	14.00	2.50	2500.00	197.00	10.10
1	17.60	1.00	20.00	14.00	2.50	2500.00	197.00	23.10
0	18.90	1.00	20.00	14.00	2.50	2500.00	197.00	30.10
1	16.80	1.20	20.00	14.00	2.50	2500.00	246.00	10.60
1	13.60	1.20	20.00	14.00	2.50	2500.00	246.00	10.50
1	15.40	1.20	20.00	14.00	2.50	2500.00	246.00	8.10
1	15.60	1.20	20.00	14.00	2.50	2500.00	246.00	25.10
1	14.90	1.20	20.00	14.00	2.50	2500.00	246.00	37.10
0	16.60	1.20	20.00	14.00	2.50	2500.00	246.00	42.10
0	12.10	1.20	20.00	14.00	2.50	2500.00	246.00	23.10
0	13.40	1.20	20.00	14.00	2.50	2500.00	246.00	30.10
0	13.70	1.20	20.00	14.00	2.50	2500.00	246.00	30.20
0	16.60	1.20	20.00	14.00	2.50	2500.00	246.00	43.10
1	17.50	1.20	20.00	14.00	2.50	2500.00	246.00	42.50
0	13.20	1.20	20.00	14.00	2.50	2500.00	246.00	10.10
1	9.30	1.40	20.00	16.00	3.00	2000.00	203.00	8.10
1	8.20	1.40	20.00	16.00	3.00	2000.00	203.00	30.20
1	10.90	1.40	20.00	16.00	3.00	2000.00	203.00	10.60
1	11.50	1.40	20.00	16.00	3.00	2000.00	203.00	42.50
0	10.40	1.40	20.00	16.00	3.00	2000.00	203.00	42.10
0	5.90	1.40	20.00	16.00	3.00	2000.00	203.00	23.10
0	7.40	1.40	20.00	16.00	3.00	2000.00	203.00	30.10
0	8.80	1.40	20.00	16.00	3.00	2000.00	203.00	37.10
0	9.60	1.40	20.00	16.00	3.00	2000.00	203.00	25.10
0	10.60	1.40	20.00	16.00	3.00	2000.00	203.00	43.10
0	7.00	1.40	20.00	16.00	3.00	2000.00	203.00	10.10
0	7.50	1.40	20.00	16.00	3.00	2000.00	203.00	10.50
0	3.10	1.70	20.00	16.00	3.00	2000.00	247.00	30.20
0	4.20	1.70	20.00	16.00	3.00	2000.00	247.00	42.10
0	1.30	1.70	20.00	16.00	3.00	2000.00	247.00	30.10
0	2.70	1.70	20.00	16.00	3.00	2000.00	247.00	37.10
0	2.40	1.70	20.00	16.00	3.00	2000.00	247.00	25.10
0	4.50	1.70	20.00	16.00	3.00	2000.00	247.00	43.10
0	5.50	1.70	20.00	16.00	3.00	2000.00	247.00	42.50
0	4.70	1.70	20.00	16.00	3.00	2000.00	247.00	10.60
0	0.90	1.70	20.00	16.00	3.00	2000.00	247.00	10.10
0	1.50	1.70	20.00	16.00	3.00	2000.00	247.00	10.50
0	3.30	1.70	20.00	16.00	3.00	2000.00	247.00	8.10
1	2.60	1.80	20.00	11.00	3.00	2000.00	192.00	25.10
1	1.50	1.90	20.00	11.00	3.00	2000.00	192.00	43.10
0	0.60	1.90	20.00	11.00	3.00	2000.00	192.00	42.50
0	2.00	1.80	20.00	11.00	3.00	2000.00	192.00	42.10

0	5.70	1.90	20.00	11.00	3.00	2000.00	192.00	23.10
0	4.70	1.80	20.00	11.00	3.00	2000.00	192.00	30.10
0	3.30	1.80	20.00	11.00	3.00	2000.00	192.00	37.10
0	3.10	1.90	20.00	11.00	3.00	2000.00	192.00	30.20
0	1.20	1.90	20.00	11.00	3.00	2000.00	192.00	10.60
0	4.90	1.90	20.00	11.00	3.00	2000.00	192.00	10.10
0	2.70	1.80	20.00	11.00	3.00	2000.00	192.00	8.10
0	4.60	1.90	20.00	11.00	3.00	2000.00	192.00	10.50

CG2103 12 OCT 88 SLAR

1	3.20	0.10	20.00	16.00	2.00	2500.00	225.00	42.10
0	5.60	0.10	20.00	16.00	2.00	2500.00	225.00	25.20
0	1.00	0.10	20.00	16.00	2.00	2500.00	225.00	43.10
0	0.60	0.10	20.00	16.00	2.00	2500.00	225.00	30.20
0	3.50	0.10	20.00	16.00	2.00	2500.00	225.00	42.50
0	1.10	0.10	20.00	16.00	2.00	2500.00	225.00	10.60
0	4.90	0.10	20.00	16.00	2.00	2500.00	225.00	10.10
0	4.40	0.10	20.00	16.00	2.00	2500.00	225.00	8.10
0	2.40	0.10	20.00	16.00	2.00	2500.00	225.00	10.50
1	3.80	0.30	20.00	16.00	2.00	2500.00	225.00	10.50
1	6.80	0.30	20.00	16.00	2.00	2500.00	225.00	43.10
0	2.60	0.30	20.00	16.00	2.00	2500.00	225.00	42.10
0	5.20	0.30	20.00	16.00	2.00	2500.00	225.00	30.20
0	2.40	0.30	20.00	16.00	2.00	2500.00	225.00	42.50
0	4.70	0.30	20.00	16.00	2.00	2500.00	225.00	10.60
0	1.00	0.30	20.00	16.00	2.00	2500.00	225.00	10.10
0	1.50	0.30	20.00	16.00	2.00	2500.00	225.00	8.10
1	8.70	0.50	20.00	16.00	2.00	2500.00	225.00	42.10
1	8.40	0.50	20.00	16.00	2.00	2500.00	225.00	42.50
1	13.10	0.50	20.00	16.00	2.00	2500.00	225.00	43.10
0	8.50	0.50	20.00	16.00	2.00	2500.00	225.00	23.10
0	11.20	0.50	20.00	16.00	2.00	2500.00	225.00	30.20
0	6.40	0.50	20.00	16.00	2.00	2500.00	225.00	25.20
0	10.80	0.50	20.00	16.00	2.00	2500.00	225.00	10.60
0	7.10	0.50	20.00	16.00	2.00	2500.00	225.00	10.10
0	7.60	0.50	20.00	16.00	2.00	2500.00	225.00	8.10
0	9.60	0.50	20.00	16.00	2.00	2500.00	225.00	10.50
1	19.10	0.70	20.00	16.00	2.00	2500.00	225.00	43.10
1	14.50	0.70	20.00	16.00	2.00	2500.00	225.00	42.50
0	14.80	0.70	20.00	16.00	2.00	2500.00	225.00	42.10
0	14.40	0.70	20.00	16.00	2.00	2500.00	225.00	23.10
0	16.90	0.70	20.00	16.00	2.00	2500.00	225.00	30.20
0	12.40	0.70	20.00	16.00	2.00	2500.00	225.00	25.20
0	16.80	0.70	20.00	16.00	2.00	2500.00	225.00	10.60
0	13.20	0.70	20.00	16.00	2.00	2500.00	225.00	10.10
0	13.60	0.70	20.00	16.00	2.00	2500.00	225.00	8.10
0	15.60	0.70	20.00	16.00	2.00	2500.00	225.00	10.50
0	19.50	1.00	20.00	14.00	2.00	4000.00	225.00	8.10
0	19.20	1.00	20.00	14.00	2.00	4000.00	225.00	10.10
0	18.40	1.00	20.00	14.00	2.00	4000.00	225.00	25.20
0	19.60	1.00	20.00	14.00	2.00	4000.00	225.00	8.10
0	19.10	1.00	20.00	14.00	2.00	4000.00	225.00	10.10
0	18.40	1.10	20.00	14.00	2.00	4000.00	225.00	25.20
1	17.50	1.30	20.00	17.00	2.00	4000.00	225.00	30.20
1	16.90	1.30	20.00	17.00	2.00	4000.00	225.00	10.60
1	14.60	1.30	20.00	17.00	2.00	4000.00	225.00	42.10
1	14.40	1.30	20.00	17.00	2.00	4000.00	225.00	42.50
0	19.10	1.30	20.00	17.00	2.00	4000.00	225.00	43.10
0	14.20	1.30	20.00	17.00	2.00	4000.00	225.00	23.10
0	12.30	1.30	20.00	17.00	2.00	4000.00	225.00	25.20
0	13.10	1.30	20.00	17.00	2.00	4000.00	225.00	10.10
0	13.50	1.30	20.00	17.00	2.00	4000.00	225.00	8.10
0	15.60	1.30	20.00	17.00	2.00	4000.00	225.00	10.50
1	8.40	1.50	20.00	17.00	2.00	4000.00	225.00	42.50
0	13.00	1.50	20.00	17.00	2.00	4000.00	225.00	43.10
0	8.60	1.50	20.00	17.00	2.00	4000.00	225.00	42.10
0	8.30	1.50	20.00	17.00	2.00	4000.00	225.00	23.10
0	11.70	1.50	20.00	17.00	2.00	4000.00	225.00	30.20
0	6.40	1.50	20.00	17.00	2.00	4000.00	225.00	25.20
0	10.90	1.50	20.00	17.00	2.00	4000.00	225.00	10.60
0	7.10	1.50	20.00	17.00	2.00	4000.00	225.00	10.10
0	7.60	1.50	20.00	17.00	2.00	4000.00	225.00	8.10

0	9.70	1.50	20.00	17.00	2.00	4000.00	225.00	10.50
1	5.60	1.70	20.00	23.00	2.50	4000.00	225.00	30.20
0	2.70	1.70	20.00	23.00	2.50	4000.00	225.00	42.10
0	2.30	1.70	20.00	23.00	2.50	4000.00	225.00	23.10
0	7.00	1.70	20.00	23.00	2.50	4000.00	225.00	43.10
0	3.60	1.70	20.00	23.00	2.50	4000.00	225.00	10.50
0	2.40	1.70	20.00	23.00	2.50	4000.00	225.00	42.50
0	4.90	1.70	20.00	23.00	2.50	4000.00	225.00	10.60
0	1.10	1.70	20.00	23.00	2.50	4000.00	225.00	10.10
0	1.50	1.70	20.00	23.00	2.50	4000.00	225.00	8.10

CG2103 14 OCT 88 SLAR

1	5.80	0.10	20.00	12.00	2.00	2500.00	225.00	43.10
1	4.40	0.10	20.00	12.00	2.00	2500.00	225.00	42.10
1	0.90	0.10	20.00	12.00	2.00	2500.00	225.00	42.50
0	3.90	0.10	20.00	12.00	2.00	2500.00	225.00	23.10
0	2.00	0.10	20.00	12.00	2.00	2500.00	225.00	34.10
0	4.00	0.10	20.00	12.00	2.00	2500.00	225.00	30.20
0	1.00	0.10	20.00	12.00	2.00	2500.00	225.00	8.10
0	3.20	0.10	20.00	12.00	2.00	2500.00	225.00	10.10
0	5.20	0.10	20.00	12.00	2.00	2500.00	225.00	10.60
0	2.50	0.10	20.00	12.00	2.00	2500.00	225.00	10.50
1	5.00	0.20	20.00	12.00	2.00	2500.00	225.00	42.50
1	3.90	0.30	20.00	12.00	2.00	2500.00	225.00	34.10
0	2.00	0.30	20.00	12.00	2.00	2500.00	225.00	30.20
0	1.60	0.30	20.00	12.00	2.00	2500.00	225.00	42.10
1	2.00	0.20	20.00	12.00	2.00	2500.00	225.00	23.10
0	4.90	0.30	20.00	12.00	2.00	2500.00	225.00	8.10
0	2.70	0.30	20.00	12.00	2.00	2500.00	225.00	10.10
0	0.70	0.30	20.00	12.00	2.00	2500.00	225.00	10.60
0	3.40	0.30	20.00	12.00	2.00	2500.00	225.00	10.50
0	6.00	0.50	20.00	12.00	2.00	2500.00	225.00	43.10
1	10.90	0.50	20.00	12.00	2.00	2500.00	225.00	8.10
1	6.60	0.50	20.00	12.00	2.00	2500.00	225.00	10.60
0	7.60	0.50	20.00	12.00	2.00	2500.00	225.00	42.10
0	8.00	0.50	20.00	12.00	2.00	2500.00	225.00	23.10
0	9.90	0.50	20.00	12.00	2.00	2500.00	225.00	34.10
0	7.90	0.50	20.00	12.00	2.00	2500.00	225.00	30.20
0	6.30	0.50	20.00	12.00	2.00	2500.00	225.00	25.20
0	8.70	0.50	20.00	12.00	2.00	2500.00	225.00	10.10
0	14.00	0.70	20.00	10.00	2.00	2500.00	225.00	23.10
0	13.60	0.70	20.00	10.00	2.00	2500.00	225.00	42.10
1	14.70	0.70	20.00	10.00	2.00	2500.00	225.00	10.10
1	11.80	0.70	20.00	10.00	2.00	2500.00	225.00	43.10
1	15.90	0.70	20.00	10.00	2.00	2500.00	225.00	34.10
0	13.80	0.70	20.00	10.00	2.00	2500.00	225.00	30.20
0	12.30	0.70	20.00	10.00	2.00	2500.00	225.00	25.20
0	16.80	0.70	20.00	10.00	2.00	2500.00	225.00	8.10
0	12.60	0.70	20.00	10.00	2.00	2500.00	225.00	10.60
0	15.40	0.70	20.00	10.00	2.00	2500.00	225.00	10.50
1	18.30	0.90	20.00	10.00	2.00	2500.00	225.00	25.20
1	17.90	1.00	20.00	10.00	2.00	2500.00	225.00	43.10
1	19.60	1.00	20.00	10.00	2.00	2500.00	225.00	42.10
0	19.90	0.90	20.00	10.00	2.00	2500.00	225.00	30.20
0	18.60	1.00	20.00	10.00	2.00	2500.00	225.00	10.60
0	20.00	1.00	20.00	10.00	2.00	2500.00	225.00	23.10
1	19.50	1.00	20.00	12.00	2.00	2500.00	225.00	42.10
0	20.00	1.00	20.00	12.00	2.00	2500.00	225.00	23.10
0	19.80	1.00	20.00	12.00	2.00	2500.00	225.00	30.20
0	18.40	1.10	20.00	12.00	2.00	2500.00	225.00	25.20
1	17.70	1.00	20.00	12.00	2.00	2500.00	225.00	43.10
0	18.60	1.00	20.00	12.00	2.00	2500.00	225.00	10.60
0	12.40	1.30	20.00	12.00	2.00	2500.00	225.00	25.20
1	16.90	1.30	20.00	12.00	2.00	2500.00	225.00	8.10
1	13.90	1.30	20.00	12.00	2.00	2500.00	225.00	30.20
1	11.80	1.30	20.00	12.00	2.00	2500.00	225.00	43.10
1	13.60	1.30	20.00	12.00	2.00	2500.00	225.00	42.10
1	14.10	1.30	20.00	12.00	2.00	2500.00	225.00	23.10
0	15.80	1.30	20.00	12.00	2.00	2500.00	225.00	34.10
0	17.10	1.30	20.00	12.00	2.00	2500.00	225.00	42.50
0	14.70	1.30	20.00	12.00	2.00	2500.00	225.00	10.10
0	12.60	1.30	20.00	12.00	2.00	2500.00	225.00	10.60
0	15.40	1.30	20.00	12.00	2.00	2500.00	225.00	10.50
1	11.10	1.50	20.00	13.00	2.00	2500.00	225.00	42.50

1	10.00	1.50	20.00	13.00	2.00	2500.00	225.00	34.10
1	6.00	1.50	20.00	13.00	2.00	2500.00	225.00	43.10
1	7.60	1.50	20.00	13.00	2.00	2500.00	225.00	42.10
1	8.00	1.50	20.00	13.00	2.00	2500.00	225.00	23.10
0	8.00	1.50	20.00	13.00	2.00	2500.00	225.00	30.20
0	6.40	1.50	20.00	13.00	2.00	2500.00	225.00	25.20
0	10.90	1.50	20.00	13.00	2.00	2500.00	225.00	8.10
0	8.80	1.50	20.00	13.00	2.00	2500.00	225.00	10.10
1	6.70	1.50	20.00	13.00	2.00	2500.00	225.00	10.60
0	9.40	1.50	20.00	13.00	2.00	2500.00	225.00	10.50
0	1.60	1.70	20.00	13.00	2.00	2500.00	225.00	42.10
0	2.00	1.70	20.00	13.00	2.00	2500.00	225.00	23.10
0	3.80	1.70	20.00	13.00	2.00	2500.00	225.00	34.10
0	2.00	1.70	20.00	13.00	2.00	2500.00	225.00	30.20
0	5.10	1.70	20.00	13.00	2.00	2500.00	225.00	42.50
0	4.90	1.70	20.00	13.00	2.00	2500.00	250.00	8.10
0	2.80	1.70	20.00	13.00	2.00	2500.00	250.00	10.10
0	0.60	1.70	20.00	13.00	2.00	2500.00	250.00	10.60
0	3.40	1.70	20.00	13.00	2.00	2500.00	250.00	10.50
1	4.40	1.90	20.00	13.00	2.00	2500.00	250.00	42.10
1	5.30	1.90	20.00	13.00	2.00	2500.00	250.00	10.60
1	5.50	1.90	20.00	13.00	2.00	2500.00	250.00	25.20
0	4.00	1.90	20.00	13.00	2.00	2500.00	250.00	23.10
1	5.90	1.90	20.00	13.00	2.00	2500.00	250.00	43.10
0	2.20	1.90	20.00	13.00	2.00	2500.00	250.00	34.10
0	4.00	1.90	20.00	13.00	2.00	2500.00	250.00	30.20
1	0.90	1.90	20.00	13.00	2.00	2500.00	250.00	42.50
0	1.10	1.90	20.00	13.00	2.00	2500.00	250.00	8.10
0	3.20	1.90	20.00	13.00	2.00	2500.00	250.00	10.10
0	2.60	1.90	20.00	13.00	2.00	2500.00	250.00	10.50
0	1.50	0.00	20.00	14.00	2.00	4500.00	225.00	29.10
1	3.50	0.10	20.00	14.00	2.00	4500.00	225.00	30.20
1	5.40	0.00	20.00	14.00	2.00	4500.00	225.00	25.20
1	5.30	0.10	20.00	14.00	2.00	4500.00	225.00	10.60
1	2.60	0.10	20.00	14.00	2.00	4500.00	225.00	34.10
1	4.40	0.10	20.00	14.00	2.00	4500.00	225.00	42.10
1	2 60	0.10	20.00	14.00	2.00	4500.00	225.00	10.50
0	4.10	0.10	20.00	14.00	2.00	4500.00	225.00	23.10
0	4.80	0.10	20.00	14.00	2.00	4500.00	225.00	43.10
0	1.20	0.10	20.00	14.00	2.00	4500.00	225.00	8.10
0	3.20	0.10	20.00	14.00	2.00	4500.00	225.00	10.10
1	1.60	0.20	20.00	9.00	2.00	4500.00	225.00	42.10
1	4.80	0.20	20.00	9.00	2.00	4500.00	225.00	8.10
1	3.50	0.20	20.00	9.00	2.00	4500.00	225.00	34.10
1	1.90	0.30	20.00	9.00	2.00	4500.00	225.00	23.10
1	2.70	0.30	20.00	9.00	2.00	4500.00	225.00	10.10
1	4.50	0.30	20.00	9.00	2.00	4500.00	225.00	29.10
0	1.10	0.30	20.00	9.00	2.00	4500.00	225.00	43.10
0	2.40	0.30	20.00	9.00	2.00	4500.00	225.00	30.20
0	6.20	0.20	20.00	9.00	2.00	4500.00	225.00	42.50
0	3.40	0.20	20.00	9.00	2.00	4500.00	225.00	10.50
1	6.50	0.50	20.00	9.00	2.00	4500.00	225.00	25.20
1	8.00	0.50	20.00	9.00	2.00	4500.00	225.00	23.10
0	8.80	0.50	20.00	9.00	2.00	4500.00	225.00	10.10
1	6.70	0.50	20.00	9.00	2.00	4500.00	225.00	10.60
0	7.60	0.50	20.00	9.00	2.00	4500.00	225.00	42.10
0	7.00	0.50	20.00	9.00	2.00	4500.00	225.00	43.10
0	10.50	0.50	20.00	9.00	2.00	4500.00	225.00	29.10
0	9.40	0.50	20.00	9.00	2.00	4500.00	225.00	34.10
0	8.50	0.50	20.00	9.00	2.00	4500.00	225.00	30.20
0	12.30	0.50	20.00	9.00	2.00	4500.00	225.00	42.50
0	10.90	0.50	20.00	9.00	2.00	4500.00	225.00	8.10
0	9.40	0.50	20.00	9.00	2.00	4500.00	225.00	10.50

1	12.70	0.70	20.00	13.00	2.00	4500.00	225.00	10.60
1	14.00	0.70	20.00	13.00	2.00	4500.00	225.00	23.10
1	15.40	0.70	20.00	13.00	2.00	4500.00	225.00	34.10
1	14.80	0.70	20.00	13.00	2.00	4500.00	225.00	10.10
0	13.60	0.70	20.00	13.00	2.00	4500.00	225.00	42.10
0	13.00	0.70	20.00	13.00	2.00	4500.00	225.00	43.10
0	16.60	0.70	20.00	13.00	2.00	4500.00	225.00	29.10
0	14.50	0.70	20.00	13.00	2.00	4500.00	225.00	30.20
0	12.50	0.70	20.00	13.00	2.00	4500.00	225.00	25.20
0	18.30	0.70	20.00	13.00	2.00	4500.00	225.00	42.50
0	16.90	0.70	20.00	13.00	2.00	4500.00	225.00	8.10
0	15.40	0.70	20.00	13.00	2.00	4500.00	225.00	10.50
1	18.90	0.90	20.00	13.00	2.00	4500.00	225.00	43.10
0	18.40	0.90	20.00	13.00	2.00	4500.00	225.00	25.20
0	19.90	0.90	20.00	13.00	2.00	4500.00	225.00	23.10
0	18.60	0.90	20.00	13.00	2.00	4500.00	225.00	10.60
0	19.60	0.90	20.00	13.00	2.00	4500.00	225.00	42.10
1	18.90	1.00	20.00	13.00	2.00	4500.00	225.00	43.10
0	19.70	1.00	20.00	13.00	2.00	4500.00	225.00	42.10
0	18.70	1.00	20.00	13.00	2.00	4500.00	225.00	10.60
0	19.80	1.00	20.00	13.00	2.00	4500.00	225.00	23.10
0	18.40	1.00	20.00	13.00	2.00	4500.00	225.00	25.20
1	14.30	1.20	20.00	13.00	2.00	4500.00	225.00	30.20
1	12.40	1.20	20.00	13.00	2.00	4500.00	225.00	25.20
0	13.00	1.20	20.00	13.00	2.00	4500.00	225.00	43.10
1	15.60	1.20	20.00	13.00	2.00	4500.00	225.00	34.10
1	16.90	1.20	20.00	13.00	2.00	4500.00	225.00	8.10
1	18.20	1.20	20.00	13.00	2.00	4500.00	225.00	42.50
1	15.40	1.20	20.00	13.00	2.00	4500.00	225.00	10.50
1	12.70	1.20	20.00	13.00	2.00	4500.00	225.00	10.60
0	13.60	1.20	20.00	13.00	2.00	4500.00	225.00	42.10
0	13.60	1.20	20.00	13.00	2.00	4500.00	225.00	23.10
0	16.50	1.20	20.00	13.00	2.00	4500.00	225.00	29.10
0	14.80	1.20	20.00	13.00	2.00	4500.00	225.00	10.10
1	9.40	1.40	20.00	13.00	2.00	4500.00	225.00	10.50
1	6.70	1.40	20.00	13.00	2.00	4500.00	225.00	10.60
0	7.00	1.40	20.00	13.00	2.00	4500.00	225.00	43.10
0	7.60	1.40	20.00	13.00	2.00	4500.00	225.00	42.10
0	7.60	1.40	20.00	13.00	2.00	4500.00	225.00	23.10
0	10.60	1.40	20.00	13.00	2.00	4500.00	225.00	29.10
0	6.40	1.40	20.00	13.00	2.00	4500.00	225.00	25.20
0	8.30	1.40	20.00	13.00	2.00	4500.00	225.00	30.20
0	9.30	1.40	20.00	13.00	2.00	4500.00	225.00	34.10
0	12.30	1.40	20.00	13.00	2.00	4500.00	225.00	42.50
0	10.90	1.40	20.00	13.00	2.00	4500.00	225.00	8.10
0	8.80	1.40	20.00	13.00	2.00	4500.00	225.00	10.10
1	4.50	1.60	20.00	18.00	2.00	4500.00	225.00	29.10
1	2.10	1.60	20.00	18.00	2.00	4500.00	225.00	30.20
1	4.80	1.60	20.00	18.00	2.00	4500.00	225.00	8.10
0	1.50	1.70	20.00	18.00	2.00	4500.00	225.00	42.10
0	4.60	1.60	20.00	18.00	2.00	4500.00	225.00	29.10
0	3.30	1.60	20.00	18.00	2.00	4500.00	225.00	34.10
0	6.30	1.60	20.00	18.00	2.00	4500.00	225.00	42.50
0	2.70	1.60	20.00	18.00	2.00	4500.00	225.00	10.10
0	3.40	1.60	20.00	18.00	2.00	4500.00	225.00	10.50
1	4.40	1.80	20.00	18.00	2.00	4500.00	225.00	42.10
1	2.60	1.80	20.00	18.00	2.00	4500.00	225.00	10.50
1	5.30	1.80	20.00	18.00	2.00	4500.00	225.00	10.60
1	1.30	1.90	20.00	18.00	2.00	4500.00	225.00	29.10
1	4.00	1.90	20.00	18.00	2.00	4500.00	225.00	30.20
1	1.20	1.80	20.00	18.00	2.00	4500.00	225.00	8.10
0	5.10	1.80	20.00	18.00	2.00	4500.00	225.00	23.10
0	5.10	1.80	20.00	18.00	2.00	4500.00	225.00	43.10

0	2.60	1.80	20.00	18.00	2.00	4500.00	225.00	34.10
0	5.60	1.90	20.00	18.00	2.00	4500.00	225.00	25.20
0	3.30	1.80	20.00	18.00	2.00	4500.00	225.00	10.10

CG2103 17 OCT 88 SLAR

1	5.50	0.00	20.00	11.00	2.50	2500.00	225.00	30.20
1	1.80	0.00	20.00	11.00	2.50	2500.00	225.00	34.20
1	4.00	0.00	20.00	11.00	2.50	2500.00	225.00	34.10
0	1.10	0.10	20.00	11.00	2.50	2500.00	225.00	10.10
1	2.40	0.10	20.00	11.00	2.50	2500.00	225.00	29.10
1	4.40	0.10	20.00	11.00	2.50	2500.00	225.00	42.10
1	5.50	0.10	20.00	11.00	2.50	2500.00	225.00	28.10
0	6.10	0.10	20.00	11.00	2.50	2500.00	225.00	43.10
0	4.00	0.10	20.00	11.00	2.50	2500.00	225.00	32.10
0	0.60	0.10	20.00	11.00	2.50	2500.00	225.00	42.50
0	3.20	0.10	20.00	11.00	2.50	2500.00	225.00	10.60
0	5.30	0.10	20.00	11.00	2.50	2500.00	225.00	10.50
1	2.40	0.10	20.00	11.00	2.50	2500.00	225.00	8.10
1	5.60	0.20	20.00	11.00	2.50	2500.00	225.00	42.50
1	1.80	0.20	20.00	11.00	2.50	2500.00	225.00	42.10
1	3.70	0.20	20.00	11.00	2.50	2500.00	225.00	8.10
1	3.50	0.20	20.00	11.00	2.50	2500.00	225.00	29.10
1	5.10	0.20	20.00	11.00	2.50	2500.00	225.00	10.10
1	2.10	0.30	20.00	11.00	2.50	2500.00	225.00	34.10
0	2.90	0.20	20.00	11.00	2.50	2500.00	225.00	10.60
0	0.60	0.20	20.00	11.00	2.50	2500.00	225.00	28.10
0	2.20	0.20	20.00	11.00	2.50	2500.00	225.00	32.10
0	0.70	0.30	20.00	11.00	2.50	2500.00	225.00	30.20
0	0.80	0.20	20.00	11.00	2.50	2500.00	225.00	10.50
0	8.10	0.50	20.00	11.00	2.50	2500.00	225.00	34.10
1	10.40	0.50	20.00	11.00	2.50	2500.00	225.00	34.20
1	5.80	0.50	20.00	11.00	2.50	2500.00	225.00	43.10
1	9.20	0.50	20.00	11.00	2.50	2500.00	225.00	29.10
1	7.60	0.50	20.00	11.00	2.50	2500.00	225.00	42.10
0	6.70	0.50	20.00	11.00	2.50	2500.00	225.00	10.50
1	6.40	0.50	20.00	11.00	2.50	2500.00	225.00	28.10
0	8.00	0.50	20.00	11.00	2.50	2500.00	225.00	32.10
0	7.00	0.50	20.00	11.00	2.50	2500.00	225.00	30.20
0	11.40	0.50	20.00	11.00	2.50	2500.00	225.00	42.50
0	11.00	0.50	20.00	11.00	2.50	2500.00	225.00	10.10
0	8.90	0.50	20.00	11.00	2.50	2500.00	225.00	10.60
0	9.60	0.50	20.00	11.00	2.50	2500.00	225.00	8.10
1	13.80	0.70	20.00	11.00	2.50	2500.00	225.00	32.10
1	15.30	0.70	20.00	11.00	2.50	2500.00	225.00	8.10
1	12.30	0.70	20.00	11.00	2.50	2500.00	225.00	10.50
1	16.50	0.70	20.00	11.00	2.50	2500.00	225.00	10.10
1	11.40	0.70	20.00	11.00	2.50	2500.00	225.00	43.10
1	13.70	0.70	20.00	11.00	2.50	2500.00	225.00	34.10
1	12.70	0.70	20.00	11.00	2.50	2500.00	225.00	30.20
0	13.30	0.70	20.00	11.00	2.50	2500.00	225.00	42.10
0	15.60	0.70	20.00	11.00	2.50	2500.00	225.00	29.10
1	15.90	0.70	20.00	11.00	2.50	2500.00	225.00	34.20
0	12.20	0.70	20.00	11.00	2.50	2500.00	225.00	28.10
0	17.30	0.70	20.00	11.00	2.50	2500.00	225.00	42.50
0	14.40	0.70	20.00	11.00	2.50	2500.00	225.00	10.60
1	18.20	0.90	20.00	10.00	2.00	2500.00	225.00	43.10
1	18.90	0.90	20.00	10.00	2.00	2500.00	225.00	28.10
0	19.50	0.90	20.00	10.00	2.00	2500.00	225.00	30.20
0	19.10	0.90	20.00	10.00	2.00	2500.00	225.00	10.50
0	20.00	0.90	20.00	10.00	2.00	2500.00	225.00	42.10
1	18.10	1.00	20.00	10.00	2.00	2500.00	236.00	43.10
0	19.00	1.00	20.00	10.00	2.00	2500.00	236.00	28.10
0	20.00	1.00	20.00	10.00	2.00	2500.00	236.00	42.10
0	19.00	1.00	20.00	10.00	2.00	2500.00	236.00	10.50
1	19.80	1.00	20.00	10.00	2.00	2500.00	236.00	30.20
1	13.60	1.20	20.00	10.00	2.00	2500.00	236.00	30.20
1	14.10	1.20	20.00	10.00	2.00	2500.00	236.00	34.10

1	16.30	1.20	20.00	10.00	2.00	2500.00	236.00	34.20
1	11.80	1.20	20.00	10.00	2.00	2500.00	236.00	43.10
1	15.50	1.30	20.00	10.00	2.00	2500.00	236.00	8.10
1	17.50	1.30	20.00	10.00	2.00	2500.00	236.00	42.50
1	13.60	1.30	20.00	10.00	2.00	2500.00	236.00	42.10
1	12.60	1.30	20.00	10.00	2.00	2500.00	236.00	28.10
0	16.30	1.30	20.00	10.00	2.00	2500.00	236.00	29.10
0	14.00	1.30	20.00	10.00	2.00	2500.00	236.00	32.10
1	16.90	1.20	20.00	10.00	2.00	2500.00	236.00	10.10
0	14.70	1.20	20.00	10.00	2.00	2500.00	236.00	10.60
0	12.60	1.30	20.00	10.00	2.00	2500.00	236.00	10.50
1	8.00	1.40	20.00	10.00	2.00	2500.00	236.00	32.10
1	11.50	1.40	20.00	10.00	2.00	2500.00	236.00	42.50
1	6.50	1.40	20.00	10.00	2.00	2500.00	236.00	28.10
1	10.20	1.40	20.00	10.00	2.00	2500.00	236.00	29.10
1	9.60	1.40	20.00	10.00	2.00	2500.00	236.00	8.10
1	5.50	1.40	20.00	10.00	2.00	2500.00	236.00	43.10
1	8.70	1.40	20.00	10.00	2.00	2500.00	236.00	10.60
1	7.60	1.40	20.00	10.00	2.00	2500.00	236.00	42.10
1	8.00	1.40	20.00	10.00	2.00	2500.00	236.00	34.10
0	10.00	1.40	20.00	10.00	2.00	2500.00	236.00	34.20
0	7.70	1.40	20.00	10.00	2.00	2500.00	236.00	30.20
0	10.80	1.40	20.00	10.00	2.00	2500.00	236.00	10.10
0	6.60	1.40	20.00	10.00	2.00	2500.00	236.00	10.50
1	1.60	1.60	20.00	10.00	2.00	2500.00	236.00	30.20
1	2.10	1.60	20.00	10.00	2.00	2500.00	236.00	34.10
1	4.40	1.70	20.00	10.00	2.00	2500.00	236.00	34.20
1	2.80	1.70	20.00	10.00	2.00	2500.00	236.00	10.60
1	3.70	1.70	20.00	10.00	2.00	2500.00	236.00	8.10
1	5.50	1.70	20.00	10.00	2.00	2500.00	236.00	42.50
1	4.00	1.70	20.00	10.00	2.00	2500.00	236.00	29.10
0	0.70	1.70	20.00	10.00	2.00	2500.00	236.00	28.10
0	1.70	1.70	20.00	10.00	2.00	2500.00	236.00	42.10
0	2.10	1.70	20.00	10.00	2.00	2500.00	236.00	32.10
0	5.00	1.70	20.00	10.00	2.00	2500.00	236.00	10.10
0	0.90	1.70	20.00	10.00	2.00	2500.00	236.00	10.50
1	5.50	1.80	20.00	12.00	1.50	2500.00	236.00	28.10
1	4.40	1.80	20.00	12.00	1.50	2500.00	236.00	42.10
1	2.20	1.80	20.00	12.00	1.50	2500.00	236.00	29.10
1	6.50	1.80	20.00	12.00	1.50	2500.00	236.00	43.10
1	1.00	1.80	20.00	12.00	1.50	2500.00	236.00	10.10
0	4.00	1.80	20.00	12.00	1.50	2500.00	236.00	34.10
0	2.00	1.80	20.00	12.00	1.50	2500.00	236.00	34.20
0	3.90	1.80	20.00	12.00	1.50	2500.00	236.00	32.10
0	5.20	1.90	20.00	12.00	1.50	2500.00	236.00	30.20
0	3.20	1.80	20.00	12.00	1.50	2500.00	236.00	10.60
0	5.30	1.80	20.00	12.00	1.50	2500.00	236.00	10.50
0	2.40	1.80	20.00	12.00	1.50	2500.00	236.00	8.10
1	0.60	1.80	20.00	12.00	1.50	2500.00	236.00	42.50
1	3.90	0.00	20.00	8.00	1.00	4000.00	250.00	34.10
1	1.00	0.00	20.00	8.00	1.00	4000.00	250.00	10.10
1	2.40	0.10	20.00	8.00	1.00	4000.00	250.00	29.10
1	5.30	0.10	20.00	8.00	1.00	4000.00	250.00	10.50
1	4.40	0.10	20.00	8.00	1.00	4000.00	250.00	42.10
0	1.60	0.00	20.00	8.00	1.00	4000.00	250.00	34.20
0	5.60	0.10	20.00	8.00	1.00	4000.00	250.00	28.10
0	4.00	0.10	20.00	8.00	1.00	4000.00	250.00	32.10
0	6.30	0.00	20.00	8.00	1.00	4000.00	250.00	43.10
0	3.20	0.00	20.00	8.00	1.00	4000.00	250.00	10.60
0	2.40	0.10	20.00	8.00	1.00	4000.00	250.00	8.10
1	2.10	0.20	20.00	8.00	1.00	4000.00	250.00	32.10
1	5.50	0.20	20.00	8.00	1.00	4000.00	250.00	42.50
1	3.60	0.20	20.00	8.00	1.00	4000.00	250.00	29.10

1	2.40	0.20	20.00	8.00	1.00	4000.00	250.00	34.10
1	4.40	0.20	20.00	8.00	1.00	4000.00	250.00	34.20
0	1.70	0.20	20.00	8.00	1.00	4000.00	250.00	42.10
0	5.00	0.20	20.00	8.00	1.00	4000.00	250.00	10.10
1	2.90	0.20	20.00	8.00	1.00	4000.00	250.00	10.60
0	3.70	0.20	20.00	8.00	1.00	4000.00	250.00	8.10
1	10.10	0.40	20.00	8.00	1.00	4000.00	253.00	34.20
1	5.70	0.40	20.00	8.00	1.00	4000.00	253.00	43.10
1	9.40	0.40	20.00	8.00	1.00	4000.00	253.00	29.10
1	10.90	0.40	20.00	8.00	1.00	4000.00	253.00	10.10
1	7.50	0.40	20.00	8.00	1.00	4000.00	253.00	42.10
1	11.50	0.50	20.00	8.00	1.00	4000.00	253.00	42.50
1	8.00	0.50	20.00	8.00	1.00	4000.00	253.00	32.10
1	6.60	0.50	20.00	8.00	1.00	4000.00	253.00	28.10
0	8.20	0.40	20.00	8.00	1.00	4000.00	253.00	34.10
0	8.70	0.40	20.00	8.00	1.00	4000.00	253.00	10.60
0	6.70	0.40	20.00	8.00	1.00	4000.00	253.00	10.50
0	9.50	0.40	20.00	8.00	1.00	4000.00	253.00	8.10
1	12.60	0.60	20.00	8.00	1.00	4000.00	250.00	10.50
1	14.50	0.60	20.00	8.00	1.00	4000.00	250.00	34.10
0	13.90	0.60	20.00	8.00	1.00	4000.00	250.00	32.10
0	12.40	0.60	20.00	8.00	1.00	4000.00	250.00	28.10
0	13.50	0.60	20.00	8.00	1.00	4000.00	250.00	42.10
0	17.40	0.60	20.00	8.00	1.00	4000.00	250.00	42.50
0	15.40	0.60	20.00	8.00	1.00	4000.00	250.00	29.10
0	11.70	0.60	20.00	8.00	1.00	4000.00	250.00	43.10
0	16.10	0.60	20.00	8.00	1.00	4000.00	250.00	34.20
0	16.80	0.60	20.00	8.00	1.00	4000.00	250.00	10.10
0	14.70	0.60	20.00	8.00	1.00	4000.00	250.00	10.60
0	15.50	0.60	20.00	8.00	1.00	4000.00	250.00	8.10
1	18.20	0.90	20.00	8.00	1.00	4000.00	250.00	43.10
0	19.20	0.90	20.00	8.00	1.00	4000.00	250.00	10.50
0	20.00	0.90	20.00	8.00	1.00	4000.00	250.00	42.10
0	19.10	0.90	20.00	8.00	1.00	4000.00	250.00	28.10

CG2103 19 OCT 88 SLAR 40 nmi RANGE SCALE

1	3.40	0.00	40.00	15.00	2.00	4000.00	220.00	30.20
1	4.40	0.00	40.00	15.00	2.00	4000.00	220.00	10.10
1	2.10	0.00	40.00	15.00	2.00	4000.00	220.00	8.10
0	5.80	0.00	40.00	15.00	2.00	4000.00	220.00	42.10
0	2.60	0.10	40.00	15.00	2.00	4000.00	220.00	43.10
0	4.20	0.10	40.00	15.00	2.00	4000.00	220.00	32.10
0	1.40	0.00	40.00	15.00	2.00	4000.00	220.00	10.50
1	4.20	0.30	40.00	15.00	2.00	4000.00	224.00	42.10
0	10.60	0.30	40.00	15.00	2.00	4000.00	224.00	34.20
0	6.40	0.30	40.00	15.00	2.00	4000.00	224.00	30.20
0	7.80	0.30	40.00	15.00	2.00	4000.00	224.00	43.10
0	5.80	0.30	40.00	15.00	2.00	4000.00	224.00	32.10
0	8.20	0.30	40.00	15.00	2.00	4000.00	224.00	42.50
0	12.20	0.30	40.00	15.00	2.00	4000.00	224.00	8.10
0	10.60	0.30	40.00	15.00	2.00	4000.00	224.00	10.60
0	8.50	0.30	40.00	15.00	2.00	4000.00	224.00	10.50
0	5.60	0.30	40.00	15.00	2.00	4000.00	224.00	10.10
1	16.40	0.50	40.00	15.00	2.00	4000.00	220.00	30.20
1	20.70	0.50	40.00	15.00	2.00	4000.00	220.00	34.20
1	18.30	0.50	40.00	15.00	2.00	4000.00	220.00	42.50
1	20.70	0.50	40.00	15.00	2.00	4000.00	220.00	10.60
1	21.20	0.50	40.00	15.00	2.00	4000.00	220.00	29.10
1	17.60	0.50	40.00	15.00	2.00	4000.00	220.00	43.10
0	14.20	0.50	40.00	15.00	2.00	4000.00	220.00	42.10
0	15.80	0.50	40.00	15.00	2.00	4000.00	220.00	32.10
0	22.20	0.50	40.00	15.00	2.00	4000.00	220.00	8.10
0	18.60	0.50	40.00	15.00	2.00	4000.00	220.00	10.50
0	15.60	0.50	40.00	15.00	2.00	4000.00	220.00	10.10
1	27.40	0.70	40.00	14.00	2.00	4000.00	220.00	43.10
1	28.10	0.70	40.00	14.00	2.00	4000.00	220.00	42.50
1	25.50	0.70	40.00	14.00	2.00	4000.00	220.00	10.10
1	30.70	0.70	40.00	14.00	2.00	4000.00	220.00	10.60
1	30.60	0.70	40.00	14.00	2.00	4000.00	220.00	34.20
0	24.20	0.70	40.00	14.00	2.00	4000.00	220.00	42.10
0	30.90	0.70	40.00	14.00	2.00	4000.00	220.00	29.10
0	26.20	0.70	40.00	14.00	2.00	4000.00	220.00	30.20
0	25.90	0.70	40.00	14.00	2.00	4000.00	220.00	32.10
0	32.20	0.70	40.00	14.00	2.00	4000.00	220.00	8.10
0	28.50	0.70	40.00	14.00	2.00	4000.00	220.00	10.50
1	37.50	0.90	40.00	14.00	2.00	4000.00	220.00	43.10
1	38.20	0.90	40.00	14.00	2.00	4000.00	220.00	42.50
0	34.40	0.90	40.00	14.00	2.00	4000.00	220.00	42.10
0	36.20	0.90	40.00	14.00	2.00	4000.00	220.00	30.20
0	37.60	0.90	40.00	14.00	2.00	4000.00	220.00	43.10
0	38.60	0.90	40.00	14.00	2.00	4000.00	220.00	10.50
0	35.80	0.90	40.00	14.00	2.00	4000.00	220.00	10.10
1	21.40	1.40	40.00	17.00	2.00	4000.00	220.00	29.10
1	15.90	1.40	40.00	17.00	2.00	4000.00	220.00	32.10
1	18.40	1.40	40.00	17.00	2.00	4000.00	220.00	42.50
1	15.60	1.40	40.00	17.00	2.00	4000.00	220.00	10.10
0	14.30	1.40	40.00	17.00	2.00	4000.00	220.00	42.10
0	20.60	1.40	40.00	17.00	2.00	4000.00	220.00	34.20
0	17.30	1.40	40.00	17.00	2.00	4000.00	220.00	30.20
0	17.70	1.40	40.00	17.00	2.00	4000.00	220.00	43.10
0	22.20	1.40	40.00	17.00	2.00	4000.00	220.00	8.10
0	20.70	1.40	40.00	17.00	2.00	4000.00	220.00	10.60
0	18.60	1.40	40.00	17.00	2.00	4000.00	220.00	10.50
1	10.70	1.60	40.00	28.00	3.00	4000.00	220.00	10.60
1	4.20	1.60	40.00	28.00	3.00	4000.00	220.00	42.10
1	8.20	1.60	40.00	28.00	3.00	4000.00	220.00	42.50
1	11.20	1.60	40.00	28.00	3.00	4000.00	220.00	29.10
0	10.20	1.60	40.00	28.00	3.00	4000.00	220.00	34.20

0	6.80	1.60	40.00	28.00	3.00	4000.00	220.00	30.20
0	7.50	1.60	40.00	28.00	3.00	4000.00	220.00	43.10
0	5.80	1.60	40.00	28.00	3.00	4000.00	220.00	32.10
0	12.10	1.60	40.00	28.00	3.00	4000.00	220.00	8.10
0	8.50	1.60	40.00	28.00	3.00	4000.00	220.00	10.50
0	5.60	1.60	40.00	28.00	3.00	4000.00	220.00	10.10
1	4.30	1.90	40.00	28.00	3.00	4000.00	220.00	32.10
0	5.80	1.90	40.00	28.00	3.00	4000.00	220.00	42.10
0	1.20	1.80	40.00	28.00	3.00	4000.00	220.00	29.10
0	3.30	1.90	40.00	28.00	3.00	4000.00	220.00	30.20
0	2.60	1.80	40.00	28.00	3.00	4000.00	220.00	43.10
0	1.60	1.90	40.00	28.00	3.00	4000.00	220.00	42.50
0	2.20	1.90	40.00	28.00	3.00	4000.00	220.00	8.10
0	1.40	1.90	40.00	28.00	3.00	4000.00	220.00	10.50
0	4.40	1.90	40.00	28.00	3.00	4000.00	220.00	10.10

CG2103 21 OCT 88 SLAR 40 nmi RANGE SCALE

1	11.70	0.00	40.00	15.00	2.00	4000.00	240.00	8.10
1	8.00	0.10	40.00	15.00	2.00	4000.00	240.00	42.50
1	11.20	0.10	40.00	15.00	2.00	4000.00	240.00	29.10
0	3.60	0.00	40.00	15.00	2.00	4000.00	240.00	42.10
0	10.20	0.00	40.00	15.00	2.00	4000.00	240.00	34.20
0	7.00	0.00	40.00	15.00	2.00	4000.00	240.00	30.20
0	7.40	0.10	40.00	15.00	2.00	4000.00	240.00	43.10
1	5.40	0.10	40.00	15.00	2.00	4000.00	240.00	32.10
1	6.50	0.10	40.00	15.00	2.00	4000.00	240.00	28.10
0	10.40	0.10	40.00	15.00	2.00	4000.00	240.00	10.50
0	8.30	0.00	40.00	15.00	2.00	4000.00	240.00	10.10
0	5.30	0.00	40.00	15.00	2.00	4000.00	240.00	10.60
1	16.50	0.30	40.00	15.00	2.00	4000.00	230.00	28.10
1	17.20	0.30	40.00	15.00	2.00	4000.00	230.00	43.10
1	21.20	0.30	40.00	15.00	2.00	4000.00	230.00	29.10
1	15.40	0.30	40.00	15.00	2.00	4000.00	230.00	32.10
1	18.00	0.30	40.00	15.00	2.00	4000.00	230.00	42.50
1	20.40	0.30	40.00	15.00	2.00	4000.00	230.00	10.50
1	20.20	0.30	40.00	15.00	2.00	4000.00	230.00	34.20
0	13.60	0.30	40.00	15.00	2.00	4000.00	230.00	42.10
0	17.00	0.30	40.00	15.00	2.00	4000.00	230.00	30.20
0	21.60	0.30	40.00	15.00	2.00	4000.00	230.00	8.10
0	18.20	0.30	40.00	15.00	2.00	4000.00	230.00	10.10
0	15.20	0.30	40.00	15.00	2.00	4000.00	230.00	10.60
1	25.40	0.50	40.00	15.00	2.00	4000.00	248.00	10.60
1	26.80	0.50	40.00	15.00	2.00	4000.00	248.00	28.10
0	23.70	0.50	40.00	15.00	2.00	4000.00	248.00	42.10
0	30.20	0.50	40.00	15.00	2.00	4000.00	248.00	34.20
0	31.40	0.50	40.00	15.00	2.00	4000.00	248.00	29.10
0	27.20	0.50	40.00	15.00	2.00	4000.00	248.00	30.20
0	27.60	0.50	40.00	15.00	2.00	4000.00	248.00	43.10
0	25.50	0.50	40.00	15.00	2.00	4000.00	248.00	32.10
0	28.10	0.50	40.00	15.00	2.00	4000.00	248.00	42.50
0	31.70	0.50	40.00	15.00	2.00	4000.00	248.00	8.10
0	30.50	0.50	40.00	15.00	2.00	4000.00	248.00	10.50
0	28.40	0.50	40.00	15.00	2.00	4000.00	248.00	10.10
0	33.60	0.70	40.00	15.00	1.50	4000.00	238.00	42.10
0	37.10	0.70	40.00	15.00	1.50	4000.00	238.00	30.20
0	37.30	0.70	40.00	15.00	1.50	4000.00	238.00	43.10
0	35.50	0.70	40.00	15.00	1.50	4000.00	238.00	32.10
0	36.70	0.70	40.00	15.00	1.50	4000.00	238.00	28.10
0	38.00	0.70	40.00	15.00	1.50	4000.00	238.00	42.50
0	38.30	0.70	40.00	15.00	1.50	4000.00	238.00	10.10
0	35.20	0.70	40.00	15.00	1.50	4000.00	238.00	10.60
1	36.60	0.80	40.00	15.00	1.50	4000.00	246.00	28.10
0	33.80	0.70	40.00	15.00	1.50	4000.00	246.00	42.10
0	37.00	0.70	40.00	15.00	1.50	4000.00	246.00	30.20
0	37.50	0.80	40.00	15.00	1.50	4000.00	246.00	43.10
0	35.40	0.80	40.00	15.00	1.50	4000.00	246.00	32.10
0	38.10	0.70	40.00	15.00	1.50	4000.00	246.00	42.50
0	38.40	0.70	40.00	15.00	1.50	4000.00	246.00	10.10
0	35.30	0.70	40.00	15.00	1.50	4000.00	246.00	10.60
1	27.40	0.90	40.00	15.00	2.00	4000.00	221.00	43.10
1	28.20	0.90	40.00	15.00	2.00	4000.00	221.00	42.50
1	23.60	1.00	40.00	15.00	2.00	4000.00	221.00	42.10
1	28.20	1.00	40.00	15.00	2.00	4000.00	221.00	10.10
0	30.10	1.00	40.00	15.00	2.00	4000.00	221.00	34.20
0	31.20	0.90	40.00	15.00	2.00	4000.00	221.00	29.10
0	27.10	1.00	40.00	15.00	2.00	4000.00	221.00	30.20
0	25.40	0.90	40.00	15.00	2.00	4000.00	221.00	32.10
0	26.60	0.90	40.00	15.00	2.00	4000.00	221.00	28.10
0	31.60	1.00	40.00	15.00	2.00	4000.00	221.00	8.10

0	30.40	1.00	40.00	15.00	2.00	4000.00	221.00	10.50
0	25.40	1.00	40.00	15.00	2.00	4000.00	221.00	10.60
1	20.00	1.10	40.00	15.00	2.00	4000.00	256.00	34.20
1	18.00	1.10	40.00	15.00	2.00	4000.00	256.00	42.50
1	17.40	1.10	40.00	15.00	2.00	4000.00	256.00	43.10
0	13.60	1.10	40.00	15.00	2.00	4000.00	256.00	42.10
0	21.20	1.10	40.00	15.00	2.00	4000.00	256.00	29.10
0	17.20	1.10	40.00	15.00	2.00	4000.00	256.00	30.20
0	15.30	1.10	40.00	15.00	2.00	4000.00	256.00	32.10
0	16.60	1.20	40.00	15.00	2.00	4000.00	256.00	28.10
0	21.60	1.10	40.00	15.00	2.00	4000.00	256.00	8.10
0	20.40	1.10	40.00	15.00	2.00	4000.00	256.00	10.50
0	18.20	1.10	40.00	15.00	2.00	4000.00	256.00	10.10
0	15.30	1.10	40.00	15.00	2.00	4000.00	256.00	10.60
1	7.40	1.30	40.00	15.00	2.00	4000.00	230.00	43.10
1	10.00	1.40	40.00	18.00	2.00	4000.00	230.00	34.20
0	3.60	1.30	40.00	15.00	2.00	4000.00	230.00	42.10
0	11.00	1.30	40.00	15.00	2.00	4000.00	230.00	29.10
0	7.30	1.40	40.00	18.00	2.00	4000.00	230.00	30.20
0	5.40	1.30	40.00	15.00	2.00	4000.00	230.00	32.10
0	6.70	1.30	40.00	15.00	2.00	4000.00	230.00	28.10
0	7.90	1.30	40.00	15.00	2.00	4000.00	230.00	42.50
0	11.60	1.40	40.00	18.00	2.00	4000.00	230.00	8.10
0	10.40	1.30	40.00	15.00	2.00	4000.00	230.00	10.50
0	8.20	1.40	40.00	18.00	2.00	4000.00	230.00	10.10
0	5.20	1.30	40.00	15.00	2.00	4000.00	230.00	10.60
1	7.50	0.00	40.00	23.00	2.50	4000.00	246.00	30.20
1	10.60	0.00	40.00	23.00	2.50	4000.00	246.00	34.20
1	11.60	0.00	40.00	23.00	2.50	4000.00	246.00	8.10
1	11.40	0.10	40.00	23.00	2.50	4000.00	246.00	29.10
1	8.00	0.00	40.00	23.00	2.50	4000.00	246.00	42.50
0	3.60	0.00	40.00	23.00	2.50	4000.00	246.00	42.10
0	7.40	0.10	40.00	23.00	2.50	4000.00	246.00	43.10
0	5.40	0.10	40.00	23.00	2.50	4000.00	246.00	32.10
0	6.60	0.10	40.00	23.00	2.50	4000.00	246.00	28.10
0	10.40	0.00	40.00	23.00	2.50	4000.00	246.00	10.50
0	8.20	0.00	40.00	23.00	2.50	4000.00	246.00	10.10
0	5.20	0.00	40.00	23.00	2.50	4000.00	246.00	10.60
1	21.50	0.20	40.00	24.00	3.00	4000.00	221.00	29.10
1	17.80	0.30	40.00	24.00	3.00	4000.00	221.00	42.50
1	13.50	0.30	40.00	24.00	3.00	4000.00	221.00	42.10
1	21.60	0.30	40.00	24.00	3.00	4000.00	221.00	8.10
1	20.10	0.30	40.00	24.00	3.00	4000.00	221.00	34.20
0	17.40	0.30	40.00	24.00	3.00	4000.00	221.00	30.20
0	17.30	0.20	40.00	24.00	3.00	4000.00	221.00	43.10
0	15.30	0.30	40.00	24.00	3.00	4000.00	221.00	32.10
0	16.50	0.20	40.00	24.00	3.00	4000.00	221.00	28.10
0	20.30	0.30	40.00	24.00	3.00	4000.00	221.00	10.50
0	18.20	0.30	40.00	24.00	3.00	4000.00	221.00	10.10
0	15.20	0.30	40.00	24.00	3.00	4000.00	221.00	10.60
0	23.60	0.50	40.00	24.00	3.00	4000.00	256.00	42.10
0	30.20	0.40	40.00	24.00	3.00	4000.00	256.00	34.20
0	31.80	0.50	40.00	24.00	3.00	4000.00	256.00	29.10
0	27.50	0.40	40.00	24.00	3.00	4000.00	256.00	30.20
0	27.30	0.50	40.00	24.00	3.00	4000.00	256.00	43.10
0	25.40	0.50	40.00	24.00	3.00	4000.00	256.00	32.10
0	26.80	0.50	40.00	24.00	3.00	4000.00	256.00	28.10
0	31.60	0.50	40.00	24.00	3.00	4000.00	256.00	8.10
0	30.40	0.50	40.00	24.00	3.00	4000.00	256.00	10.50
0	28.20	0.50	40.00	24.00	3.00	4000.00	256.00	10.10
0	25.20	0.50	40.00	24.00	3.00	4000.00	256.00	10.60
1	37.20	0.70	40.00	23.00	3.50	4000.00	230.00	43.10
0	33.60	0.70	40.00	23.00	3.50	4000.00	230.00	42.10

0	37.50	0.70	40.00	23.00	3.50	4000.00	230.00	30.20
0	35.40	0.70	40.00	23.00	3.50	4000.00	230.00	32.10
0	36.80	0.70	40.00	23.00	3.50	4000.00	230.00	28.10
0	38.20	0.70	40.00	23.00	3.50	4000.00	230.00	10.10
0	35.20	0.70	40.00	23.00	3.50	4000.00	230.00	10.60

CG2103 24 OCT 88 SLAR 40 nmi RANGE SCALE

1	8.40	0.10	40.00	9.50	1.00	4000.00	225.00	10.60
1	4.00	0.10	40.00	9.50	1.00	4000.00	225.00	42.10
0	8.00	0.10	40.00	9.50	1.00	4000.00	225.00	43.10
0	6.50	0.10	40.00	9.50	1.00	4000.00	225.00	30.20
0	12.10	0.10	40.00	9.50	1.00	4000.00	225.00	8.10
0	10.60	0.10	40.00	9.50	1.00	4000.00	225.00	10.10
0	5.40	0.10	40.00	9.50	1.00	4000.00	225.00	10.50
1	21.20	0.30	40.00	9.50	1.00	4000.00	225.00	42.50
1	17.80	0.30	40.00	9.50	1.00	4000.00	225.00	43.10
1	21.70	0.30	40.00	9.50	1.00	4000.00	225.00	8.10
0	13.80	0.30	40.00	9.50	1.00	4000.00	225.00	42.10
0	16.40	0.30	40.00	9.50	1.00	4000.00	225.00	30.20
0	20.30	0.30	40.00	9.50	1.00	4000.00	225.00	10.10
0	18.10	0.30	40.00	9.50	1.00	4000.00	225.00	10.60
0	15.20	0.30	40.00	9.50	1.00	4000.00	225.00	10.50
1	26.60	0.50	40.00	9.50	1.00	4000.00	225.00	30.20
0	23.80	0.50	40.00	9.50	1.00	4000.00	225.00	42.10
0	27.80	0.50	40.00	9.50	1.00	4000.00	225.00	43.10
0	30.20	0.50	40.00	9.50	1.00	4000.00	225.00	38.10
0	31.40	0.50	40.00	9.50	1.00	4000.00	225.00	42.50
0	31.70	0.50	40.00	9.50	1.00	4000.00	225.00	8.10
0	30.40	0.50	40.00	9.50	1.00	4000.00	225.00	10.10
0	28.10	0.50	40.00	9.50	1.00	4000.00	225.00	10.60
0	25.20	0.50	40.00	9.50	1.00	4000.00	225.00	10.50
0	33.90	0.80	40.00	10.00	1.00	4000.00	225.00	42.10
0	38.10	0.70	40.00	10.00	1.00	4000.00	225.00	43.10
0	37.00	0.80	40.00	10.00	1.00	4000.00	225.00	30.20
0	38.10	0.80	40.00	10.00	1.00	4000.00	225.00	10.60
1	33.80	0.90	40.00	10.00	1.00	4000.00	225.00	42.10
1	35.30	0.90	40.00	10.00	1.00	4000.00	225.00	10.50
0	37.50	0.90	40.00	10.00	1.00	4000.00	225.00	43.10
0	37.20	0.90	40.00	10.00	1.00	4000.00	225.00	30.20
0	35.60	0.90	40.00	10.00	1.00	4000.00	225.00	34.30
0	38.10	0.90	40.00	10.00	1.00	4000.00	225.00	10.60
0	23.80	1.10	40.00	11.00	1.00	4000.00	225.00	42.10
0	27.80	1.10	40.00	11.00	1.00	4000.00	225.00	43.10
0	30.20	1.10	40.00	11.00	1.00	4000.00	225.00	38.10
0	27.30	1.10	40.00	11.00	1.00	4000.00	225.00	30.20
0	25.80	1.10	40.00	11.00	1.00	4000.00	225.00	34.30
0	31.40	1.10	40.00	11.00	1.00	4000.00	225.00	42.50
0	31.70	1.10	40.00	11.00	1.00	4000.00	225.00	8.10
0	30.30	1.10	40.00	11.00	1.00	4000.00	225.00	10.10
0	28.10	1.10	40.00	11.00	1.00	4000.00	225.00	10.60
0	25.20	1.10	40.00	11.00	1.00	4000.00	225.00	10.50
1	20.30	1.30	40.00	11.00	1.00	4000.00	222.00	38.10
0	15.80	1.30	40.00	11.00	1.00	4000.00	222.00	34.30
0	13.80	1.30	40.00	11.00	1.00	4000.00	222.00	42.10
0	17.80	1.30	40.00	11.00	1.00	4000.00	222.00	43.10
0	17.50	1.30	40.00	11.00	1.00	4000.00	222.00	30.20
0	21.50	1.30	40.00	11.00	1.00	4000.00	222.00	42.50
0	21.80	1.30	40.00	11.00	1.00	4000.00	222.00	8.10
0	20.40	1.30	40.00	11.00	1.00	4000.00	222.00	10.10
0	18.10	1.30	40.00	11.00	1.00	4000.00	222.00	10.60
0	15.20	1.30	40.00	11.00	1.00	4000.00	222.00	10.50
0	3.90	1.50	40.00	11.00	1.00	4000.00	217.00	42.10
1	5.20	1.50	40.00	11.00	1.00	4000.00	217.00	10.50
1	11.80	1.50	40.00	11.00	1.00	4000.00	217.00	8.10
0	7.80	1.50	40.00	11.00	1.00	4000.00	217.00	43.10
0	10.20	1.50	40.00	11.00	1.00	4000.00	217.00	38.10
1	7.60	1.50	40.00	11.00	1.00	4000.00	217.00	30.20
0	6.00	1.50	40.00	11.00	1.00	4000.00	217.00	34.30
0	11.30	1.50	40.00	11.00	1.00	4000.00	217.00	42.50

0	10.40	1.50	40.00	11.00	1.00	4000.00	217.00	10.10
0	8.20	1.50	40.00	11.00	1.00	4000.00	217.00	10.60
0	21.30	0.50	40.00	18.00	2.50	2000.00	240.00	42.50
1	15.60	0.50	40.00	18.00	2.50	2000.00	240.00	34.30
1	20.30	0.50	40.00	18.00	2.50	2000.00	240.00	10.10
1	18.00	0.50	40.00	18.00	2.50	2000.00	240.00	10.60
1	17.00	0.50	40.00	18.00	2.50	2000.00	240.00	30.20
0	13.80	0.50	40.00	18.00	2.50	2000.00	240.00	42.10
0	17.40	0.50	40.00	18.00	2.50	2000.00	240.00	43.10
0	20.20	0.50	40.00	18.00	2.50	2000.00	240.00	38.10
0	21.80	0.50	40.00	18.00	2.50	2000.00	240.00	8.10
0	15.20	0.50	40.00	18.00	2.50	2000.00	240.00	10.50
1	27.60	0.70	40.00	18.00	2.50	2000.00	240.00	43.10
0	23.90	0.70	40.00	18.00	2.50	2000.00	240.00	42.10
0	30.30	0.70	40.00	18.00	2.50	2000.00	240.00	38.10
0	27.20	0.70	40.00	18.00	2.50	2000.00	240.00	30.20
0	25.70	0.70	40.00	21.00	3.00	2000.00	240.00	34.30
0	31.40	0.70	40.00	21.00	3.00	2000.00	240.00	42.50
0	31.80	0.70	40.00	18.00	2.50	2000.00	240.00	8.10
0	30.40	0.70	40.00	18.00	2.50	2000.00	240.00	10.10
0	28.10	0.70	40.00	18.00	2.50	2000.00	240.00	10.60
0	25.30	0.70	40.00	18.00	2.50	2000.00	240.00	10.50
0	33.80	0.90	40.00	21.00	3.00	2000.00	225.00	42.10
0	37.40	0.90	40.00	21.00	3.00	2000.00	225.00	43.10
0	37.30	0.90	40.00	21.00	3.00	2000.00	225.00	30.20
0	35.60	0.90	40.00	21.00	3.00	2000.00	225.00	34.30
0	38.10	0.90	40.00	21.00	3.00	2000.00	225.00	10.60
0	35.10	0.90	40.00	21.00	3.00	2000.00	225.00	10.50
1	35.50	1.00	40.00	21.00	3.00	2000.00	225.00	34.30
0	33.80	1.00	40.00	21.00	3.00	2000.00	225.00	42.10
0	37.50	1.00	40.00	21.00	3.00	2000.00	225.00	43.10
0	38.00	1.00	40.00	21.00	3.00	2000.00	225.00	10.60
0	35.30	1.00	40.00	21.00	3.00	2000.00	225.00	10.50
0	23.90	1.20	40.00	20.00	3.50	2000.00	230.00	42.10
0	27.40	1.20	40.00	20.00	3.50	2000.00	230.00	43.10
0	30.30	1.20	40.00	20.00	3.50	2000.00	230.00	38.10
0	25.60	1.20	40.00	20.00	3.50	2000.00	230.00	34.30
0	31.30	1.20	40.00	20.00	3.50	2000.00	230.00	42.50
0	31.90	1.20	40.00	20.00	3.50	2000.00	230.00	8.10
0	30.40	1.20	40.00	20.00	3.50	2000.00	230.00	10.10
0	28.20	1.20	40.00	20.00	3.50	2000.00	230.00	10.60
0	25.20	1.20	40.00	20.00	3.50	2000.00	230.00	10.50
1	20.30	1.40	40.00	20.00	3.50	2000.00	230.00	10.10
1	15.20	1.40	40.00	20.00	3.50	2000.00	230.00	10.50
1	21.20	1.40	40.00	20.00	3.50	2000.00	230.00	42.50
0	13.80	1.40	40.00	20.00	3.50	2000.00	230.00	42.10
0	18.10	1.40	40.00	20.00	3.50	2000.00	230.00	43.10
0	20.20	1.40	40.00	20.00	3.50	2000.00	230.00	38.10
0	15.20	1.40	40.00	20.00	3.50	2000.00	230.00	34.30
0	21.80	1.40	40.00	20.00	3.50	2000.00	230.00	8.10
0	18.20	1.40	40.00	20.00	3.50	2000.00	230.00	10.60

CG2103 24 OCT 88 SLAR 20 nmi RANGE SCALE

1	7.40	0.20	20.00	18.00	2.50	2000.00	181.00	43.10
0	3.80	0.20	20.00	18.00	2.50	2000.00	181.00	42.10
0	10.20	0.20	20.00	18.00	2.50	2000.00	181.00	38.10
0	6.80	0.20	20.00	18.00	2.50	2000.00	181.00	30.20
0	5.40	0.20	20.00	18.00	2.50	2000.00	181.00	34.30
0	11.30	0.30	20.00	18.00	2.50	2000.00	181.00	42.50
0	11.80	0.20	20.00	18.00	2.50	2000.00	181.00	8.10
0	10.30	0.20	20.00	18.00	2.50	2000.00	181.00	10.10
0	8.10	0.20	20.00	18.00	2.50	2000.00	181.00	10.60
0	5.20	0.20	20.00	18.00	2.50	2000.00	181.00	10.50

CG2103 26 OCT 88 SLAR

1	3.10	0.10	20.00	0.00	0.00	2500.00	240.00	10.50
1	5.20	0.10	20.00	0.00	0.00	2500.00	240.00	34.30
1	3.40	0.10	20.00	0.00	0.00	2500.00	240.00	43.10
0	0.90	0.10	20.00	0.00	0.00	2500.00	240.00	38.10
0	4.20	0.10	20.00	0.00	0.00	2500.00	240.00	30.20
0	5.90	0.10	20.00	0.00	0.00	2500.00	240.00	10.10
0	0.60	0.10	20.00	0.00	0.00	2500.00	240.00	8.10
1	0.90	0.30	20.00	0.00	0.00	2500.00	240.00	34.30
1	4.90	0.30	20.00	0.00	0.00	2500.00	240.00	38.10
1	2.80	0.30	20.00	0.00	0.00	2500.00	240.00	10.50
1	1.90	0.30	20.00	0.00	0.00	2500.00	240.00	30.20
1	1.20	0.30	20.00	0.00	0.00	2500.00	240.00	42.10
0	2.40	0.30	20.00	0.00	0.00	2500.00	240.00	43.10
1	6.50	0.30	20.00	0.00	0.00	2500.00	240.00	8.10
1	8.00	0.50	20.00	0.00	0.00	2500.00	240.00	30.20
1	8.70	0.50	20.00	0.00	0.00	2500.00	240.00	10.50
1	10.90	0.50	20.00	0.00	0.00	2500.00	240.00	38.10
1	12.40	0.50	20.00	0.00	0.00	2500.00	240.00	8.10
1	4.70	0.50	20.00	0.00	0.00	2500.00	240.00	42.10
0	8.60	0.50	20.00	0.00	0.00	2500.00	240.00	43.10
0	6.90	0.50	20.00	0.00	0.00	2500.00	240.00	34.30
0	5.90	0.50	20.00	0.00	0.00	2500.00	240.00	10.10
0	12.80	0.70	20.00	0.00	0.00	2500.00	240.00	34.30
1	14.40	0.70	20.00	0.00	0.00	2500.00	240.00	43.10
1	10.70	0.70	20.00	0.00	0.00	2500.00	240.00	42.10
1	14.20	0.70	20.00	0.00	0.00	2500.00	240.00	30.20
0	16.90	0.70	20.00	0.00	0.00	2500.00	240.00	38.10
0	18.50	0.70	20.00	0.00	0.00	2500.00	240.00	8.10
1	14.70	0.70	20.00	0.00	0.00	2500.00	240.00	10.50
0	12.00	0.70	20.00	0.00	0.00	2500.00	240.00	10.10
1	20.00	0.90	20.00	2.60	0.00	2500.00	240.00	30.20
1	16.70	0.90	20.00	2.60	0.00	2500.00	240.00	42.10
1	18.50	0.90	20.00	2.60	0.00	2500.00	240.00	34.30
0	17.90	0.90	20.00	2.60	0.00	2500.00	240.00	10.10
1	18.50	1.00	20.00	2.60	0.00	4000.00	240.00	34.30
1	17.90	1.00	20.00	2.60	0.00	4000.00	240.00	10.10
1	16.60	1.00	20.00	2.60	0.00	4000.00	240.00	42.10
0	19.60	1.00	20.00	2.60	0.00	4000.00	240.00	30.20
1	18.40	1.20	20.00	3.40	0.00	4000.00	240.00	8.10
1	13.70	1.20	20.00	3.40	0.00	4000.00	240.00	30.20
1	14.70	1.20	20.00	3.40	0.00	4000.00	240.00	10.50
1	16.90	1.20	20.00	3.40	0.00	4000.00	240.00	38.10
0	12.40	1.30	20.00	3.40	0.00	4000.00	240.00	34.30
0	10.50	1.20	20.00	3.40	0.00	4000.00	240.00	42.10
0	14.30	1.20	20.00	3.40	0.00	4000.00	240.00	43.10
0	11.90	1.20	20.00	3.40	0.00	4000.00	240.00	10.10
1	6.50	1.40	20.00	3.40	0.00	4000.00	240.00	34.30
1	8.50	1.40	20.00	3.40	0.00	4000.00	240.00	43.10
1	6.00	1.40	20.00	3.40	0.00	4000.00	240.00	10.10
1	7.70	1.40	20.00	3.40	0.00	4000.00	240.00	30.20
0	4.70	1.40	20.00	3.40	0.00	4000.00	240.00	42.10
0	10.90	1.40	20.00	3.40	0.00	4000.00	240.00	38.10
0	12.40	1.40	20.00	3.40	0.00	4000.00	240.00	8.10
0	8.80	1.40	20.00	3.40	0.00	4000.00	240.00	10.50
1	4.90	1.60	20.00	3.40	0.00	4000.00	240.00	38.10
1	6.40	1.60	20.00	3.40	0.00	4000.00	240.00	8.10
1	2.50	1.60	20.00	3.40	0.00	4000.00	240.00	43.10
0	1.40	1.60	20.00	3.40	0.00	4000.00	240.00	42.10
0	1.80	1.60	20.00	3.40	0.00	4000.00	240.00	30.20
1	1.10	0.10	20.00	22.00	2.00	2500.00	220.00	38.10
1	2.90	0.10	20.00	22.00	2.00	2500.00	220.00	30.20
0	7.40	0.10	20.00	22.00	2.00	2500.00	220.00	42.10

0	3.50	0.10	20.00	22.00	2.00	2500.00	220.00	43.10
0	5.60	0.10	20.00	22.00	2.00	2500.00	220.00	34.30
0	3.20	0.10	20.00	22.00	2.00	2500.00	220.00	10.50
0	6.10	0.10	20.00	22.00	2.00	2500.00	220.00	10.10
1	2.50	0.30	20.00	22.00	2.00	2500.00	250.00	43.10
1	3.20	0.30	20.00	22.00	2.00	2500.00	250.00	30.20
1	2.80	0.30	20.00	22.00	2.00	2500.00	250.00	10.50
1	6.50	0.30	20.00	22.00	2.00	2500.00	250.00	8.10
0	1.40	0.30	20.00	22.00	2.00	2500.00	250.00	42.10
0	4.90	0.30	20.00	22.00	2.00	2500.00	250.00	38.10
1	9.20	0.50	20.00	16.00	2.50	2500.00	210.00	30.20
1	6.50	0.50	20.00	16.00	2.50	2500.00	210.00	34.30
0	4.60	0.50	20.00	16.00	2.50	2500.00	210.00	42.10
0	8.60	0.50	20.00	16.00	2.50	2500.00	210.00	43.10
0	10.90	0.50	20.00	16.00	2.50	2500.00	210.00	38.10
0	12.50	0.50	20.00	16.00	2.50	2500.00	210.00	8.10
0	8.80	0.50	20.00	16.00	2.50	2500.00	210.00	10.50
0	5.90	0.50	20.00	16.00	2.50	2500.00	210.00	10.10
1	12.40	0.70	20.00	16.00	2.50	2500.00	210.00	34.30
1	15.10	0.70	20.00	16.00	2.50	2500.00	210.00	30.20
1	18.50	0.70	20.00	16.00	2.50	2500.00	210.00	8.10
0	10.60	0.70	20.00	16.00	2.50	2500.00	210.00	42.10
0	14.40	0.70	20.00	16.00	2.50	2500.00	210.00	43.10
0	17.00	0.70	20.00	16.00	2.50	2500.00	210.00	38.10
0	14.80	0.70	20.00	16.00	2.50	2500.00	210.00	10.50
0	11.90	0.70	20.00	16.00	2.50	2500.00	210.00	10.10
1	16.60	0.90	20.00	16.00	2.50	2500.00	210.00	42.10
0	18.40	0.90	20.00	16.00	2.50	2500.00	210.00	34.30
0	17.90	0.90	20.00	16.00	2.50	2500.00	210.00	10.10
0	18.30	1.00	20.00	17.00	2.50	4000.00	265.00	34.30
0	17.90	1.00	20.00	17.00	2.50	4000.00	265.00	10.10
0	16.50	1.00	20.00	17.00	2.50	4000.00	265.00	42.10
1	14.80	1.20	20.00	17.00	2.50	4000.00	212.00	10.50
1	10.60	1.20	20.00	17.00	2.50	4000.00	212.00	42.10
1	11.90	1.20	20.00	17.00	2.50	4000.00	212.00	10.10
1	18.50	1.20	20.00	17.00	2.50	4000.00	212.00	8.10
1	14.50	1.20	20.00	17.00	2.50	4000.00	212.00	43.10
0	16.90	1.20	20.00	17.00	2.50	4000.00	212.00	38.10
0	15.20	1.20	20.00	17.00	2.50	4000.00	212.00	30.20
0	12.50	1.20	20.00	17.00	2.50	4000.00	212.00	34.30
1	6.50	1.40	20.00	18.00	2.50	4000.00	265.00	34.30
0	4.70	1.40	20.00	18.00	2.50	4000.00	265.00	42.10
1	8.20	1.40	20.00	18.00	2.50	4000.00	265.00	43.10
0	10.90	1.40	20.00	18.00	2.50	4000.00	265.00	38.10
0	9.20	1.40	20.00	18.00	2.50	4000.00	265.00	30.20
0	12.50	1.40	20.00	18.00	2.50	4000.00	265.00	8.10
0	8.80	1.40	20.00	18.00	2.50	4000.00	265.00	10.50
0	6.00	1.40	20.00	18.00	2.50	4000.00	265.00	10.10
0	1.40	1.60	20.00	18.00	2.50	4000.00	215.00	42.10
0	2.40	1.60	20.00	18.00	2.50	4000.00	215.00	43.10
0	4.90	1.60	20.00	18.00	2.50	4000.00	215.00	38.10
0	3.10	1.60	20.00	18.00	2.50	4000.00	215.00	30.20
0	6.50	1.60	20.00	18.00	2.50	4000.00	215.00	8.10
0	2.80	1.60	20.00	18.00	2.50	4000.00	215.00	10.50

CG2103 28 OCT 88 SLAR 40 nmi RANGE SCALE

1	3.90	0.00	40.00	19.00	2.00	4000.00	215.00	42.10
1	10.00	0.10	40.00	19.00	2.00	4000.00	215.00	38.10
1	8.70	0.10	40.00	19.00	2.00	4000.00	215.00	30.20
0	7.90	0.10	40.00	19.00	2.00	4000.00	215.00	43.10
0	5.70	0.10	40.00	19.00	2.00	4000.00	215.00	34.30
0	11.80	0.10	40.00	19.00	2.00	4000.00	215.00	8.10
0	10.30	0.10	40.00	19.00	2.00	4000.00	215.00	10.50
0	8.00	0.00	40.00	19.00	2.00	4000.00	215.00	10.10
1	17.70	0.30	40.00	19.00	2.00	4000.00	258.00	43.10
1	18.80	0.30	40.00	19.00	2.00	4000.00	258.00	30.20
1	18.20	0.30	40.00	19.00	2.00	4000.00	258.00	10.10
0	14.00	0.30	40.00	19.00	2.00	4000.00	258.00	42.10
0	20.10	0.30	40.00	19.00	2.00	4000.00	258.00	38.10
0	15.70	0.30	40.00	19.00	2.00	4000.00	258.00	34.30
0	21.30	0.30	40.00	19.00	2.00	4000.00	258.00	8.10
0	20.40	0.30	40.00	19.00	2.00	4000.00	258.00	10.50
0	24.00	0.50	40.00	20.00	2.50	4000.00	210.00	42.10
0	28.00	0.50	40.00	20.00	2.50	4000.00	210.00	43.10
0	30.10	0.50	40.00	20.00	2.50	4000.00	210.00	38.10
0	28.80	0.50	40.00	20.00	2.50	4000.00	210.00	30.20
0	25.80	0.50	40.00	20.00	2.50	4000.00	210.00	34.30
0	31.80	0.50	40.00	20.00	2.50	4000.00	210.00	8.10
0	30.40	0.50	40.00	20.00	2.50	4000.00	210.00	10.50
0	28.10	0.50	40.00	20.00	2.50	4000.00	210.00	10.10
0	34.00	0.70	40.00	20.00	2.50	4000.00	260.00	42.10
0	37.80	0.70	40.00	20.00	2.50	4000.00	260.00	43.10
0	38.80	0.70	40.00	20.00	2.50	4000.00	260.00	30.20
0	35.80	0.70	40.00	20.00	2.50	4000.00	260.00	34.30
0	38.00	0.70	40.00	20.00	2.50	4000.00	260.00	10.10
1	33.80	0.80	40.00	20.00	2.50	4000.00	207.00	42.10
0	38.20	0.80	40.00	20.00	2.50	4000.00	207.00	43.10
0	38.80	0.80	40.00	20.00	2.50	4000.00	207.00	30.20
0	35.80	0.80	40.00	20.00	2.50	4000.00	207.00	34.30
0	38.00	0.80	40.00	20.00	2.50	4000.00	207.00	10.10
1	25.80	1.00	40.00	20.00	2.50	4000.00	260.00	34.30
1	28.20	1.00	40.00	20.00	2.50	4000.00	260.00	10.10
0	24.00	1.00	40.00	20.00	2.50	4000.00	260.00	42.10
1	28.00	1.00	40.00	20.00	2.50	4000.00	260.00	43.10
0	30.20	1.00	40.00	20.00	2.50	4000.00	260.00	38.10
0	29.00	1.00	40.00	20.00	2.50	4000.00	260.00	30.20
0	31.90	1.00	40.00	20.00	2.50	4000.00	260.00	8.10
0	30.40	1.00	40.00	20.00	2.50	4000.00	260.00	10.50
0	18.20	1.20	40.00	20.00	2.50	4000.00	207.00	43.10
1	15.70	1.20	40.00	20.00	2.50	4000.00	207.00	34.30
0	13.90	1.20	40.00	20.00	2.50	4000.00	207.00	42.10
0	20.00	1.20	40.00	20.00	2.50	4000.00	207.00	38.10
0	19.10	1.20	40.00	20.00	2.50	4000.00	207.00	30.20
0	21.80	1.20	40.00	20.00	2.50	4000.00	207.00	8.10
0	20.40	1.20	40.00	20.00	2.50	4000.00	207.00	10.50
0	18.10	1.20	40.00	20.00	2.50	4000.00	207.00	10.10
1	5.70	1.40	40.00	21.00	3.00	4000.00	260.00	34.30
1	3.90	1.40	40.00	21.00	3.00	4000.00	260.00	42.10
0	7.80	1.40	40.00	21.00	3.00	4000.00	260.00	43.10
0	10.00	1.40	40.00	21.00	3.00	4000.00	260.00	38.10
0	8.80	1.40	40.00	21.00	3.00	4000.00	260.00	30.20
0	11.80	1.40	40.00	21.00	3.00	4000.00	260.00	8.10
0	10.30	1.40	40.00	21.00	3.00	4000.00	260.00	10.50
0	8.00	1.40	40.00	21.00	3.00	4000.00	260.00	10.10
1	11.80	0.10	40.00	20.00	3.50	4000.00	200.00	8.10
0	3.90	0.10	40.00	20.00	3.50	4000.00	200.00	42.10
0	7.90	0.10	40.00	20.00	3.50	4000.00	200.00	43.10
1	10.10	0.10	40.00	20.00	3.50	4000.00	200.00	38.10

0	8.80	0.10	40.00	20.00	3.50	4000.00	200.00	30.20
0	5.80	0.10	40.00	20.00	3.50	4000.00	200.00	34.30
0	10.30	0.10	40.00	20.00	3.50	4000.00	200.00	10.50
0	8.00	0.10	40.00	20.00	3.50	4000.00	200.00	10.10
1	20.30	0.30	40.00	21.00	3.50	4000.00	276.00	10.50
0	13.80	0.30	40.00	21.00	3.50	4000.00	276.00	42.10
0	18.10	0.30	40.00	21.00	3.50	4000.00	276.00	43.10
0	20.00	0.30	40.00	21.00	3.50	4000.00	276.00	38.10
0	18.70	0.30	40.00	21.00	3.50	4000.00	276.00	30.20
0	15.70	0.30	40.00	21.00	3.50	4000.00	276.00	34.30
0	21.80	0.30	40.00	21.00	3.50	4000.00	276.00	8.10
0	18.00	0.30	40.00	21.00	3.50	4000.00	276.00	10.10
0	24.00	0.50	40.00	21.00	3.50	4000.00	298.00	42.10
0	27.70	0.50	40.00	21.00	3.50	4000.00	298.00	43.10
0	30.10	0.50	40.00	21.00	3.50	4000.00	298.00	38.10
0	29.00	0.50	40.00	21.00	3.50	4000.00	298.00	30.20
0	25.80	0.50	40.00	21.00	3.50	4000.00	298.00	34.30
0	31.80	0.50	40.00	21.00	3.50	4000.00	298.00	8.10
0	30.40	0.50	40.00	21.00	3.50	4000.00	298.00	10.50
0	28.20	0.50	40.00	21.00	3.50	4000.00	298.00	10.10
0	34.00	0.70	40.00	21.00	3.50	4000.00	277.00	42.10
0	38.10	0.70	40.00	21.00	3.50	4000.00	277.00	43.10
0	40.00	0.70	40.00	21.00	3.50	4000.00	277.00	38.10
0	39.50	0.70	40.00	21.00	3.50	4000.00	277.00	30.20
0	35.80	0.70	40.00	21.00	3.50	4000.00	277.00	34.30
0	38.10	0.70	40.00	21.00	3.50	4000.00	277.00	10.10

CG2103 06 DEC 88 SLAR

0	2.60	0.10	20.00	8.00	4.00	4000.00	225.00	4.50
0	6.20	0.10	20.00	8.00	4.00	4000.00	225.00	6.50
0	8.60	0.10	20.00	8.00	4.00	4000.00	225.00	4.50
0	6.10	0.00	20.00	8.00	4.00	4000.00	225.00	4.50
0	7.50	0.00	20.00	8.00	4.00	4000.00	225.00	6.50
0	1.80	0.00	20.00	8.00	4.00	4000.00	225.00	4.50
0	4.40	0.00	20.00	8.00	4.00	4000.00	225.00	4.50
0	2.20	0.00	20.00	8.00	4.00	4000.00	225.00	4.50
0	2.40	0.20	20.00	8.00	4.00	4000.00	225.00	4.50
0	1.30	0.20	20.00	8.00	4.00	4000.00	225.00	6.50
0	3.60	0.20	20.00	8.00	4.00	4000.00	225.00	4.50
0	1.20	0.20	20.00	8.00	4.00	4000.00	225.00	4.50
0	4.80	0.20	20.00	8.00	4.00	4000.00	225.00	4.50
0	2.60	0.20	20.00	8.00	4.00	4000.00	225.00	6.50
0	3.20	0.20	20.00	8.00	4.00	4000.00	225.00	4.50
0	2.80	0.30	20.00	8.00	4.00	4000.00	225.00	4.50
0	7.40	0.40	20.00	8.00	4.00	4000.00	225.00	4.50
0	3.80	0.40	20.00	8.00	4.00	4000.00	225.00	6.50
0	1.40	0.40	20.00	8.00	4.00	4000.00	225.00	4.50
0	3.80	0.40	20.00	8.00	4.00	4000.00	225.00	4.50
0	9.80	0.40	20.00	8.00	4.00	4000.00	225.00	4.50
0	2.50	0.40	20.00	8.00	4.00	4000.00	225.00	6.50
0	8.20	0.30	20.00	8.00	4.00	4000.00	225.00	4.50
0	5.60	0.30	20.00	8.00	4.00	4000.00	225.00	4.50
0	7.80	0.30	20.00	8.00	4.00	4000.00	225.00	4.50
1	12.40	0.50	20.00	11.00	4.00	4000.00	225.00	4.50
1	8.70	0.50	20.00	11.00	4.00	4000.00	225.00	6.50
1	6.40	0.50	20.00	11.00	4.00	4000.00	225.00	4.50
0	8.80	0.50	20.00	11.00	4.00	4000.00	225.00	4.50
0	14.80	0.60	20.00	11.00	4.00	4000.00	225.00	4.50
0	7.40	0.60	20.00	11.00	4.00	4000.00	225.00	6.50
0	13.10	0.60	20.00	11.00	4.00	4000.00	225.00	4.50
0	10.60	0.60	20.00	11.00	4.00	4000.00	225.00	4.50
0	12.80	0.60	20.00	11.00	4.00	4000.00	225.00	4.50
0	17.40	0.70	20.00	11.00	4.00	4000.00	225.00	4.50
1	13.70	0.70	20.00	11.00	4.00	4000.00	225.00	6.50
0	11.40	0.70	20.00	11.00	4.00	4000.00	225.00	4.50
0	13.80	0.70	20.00	11.00	4.00	4000.00	225.00	4.50
0	19.80	0.70	20.00	11.00	4.00	4000.00	225.00	4.50
0	12.40	0.70	20.00	11.00	4.00	4000.00	225.00	6.50
0	18.20	0.70	20.00	11.00	4.00	4000.00	225.00	4.50
0	15.60	0.70	20.00	11.00	4.00	4000.00	225.00	4.50
0	17.80	0.70	20.00	11.00	4.00	4000.00	225.00	4.50
0	18.60	0.90	20.00	11.00	4.00	4000.00	225.00	6.50
1	16.30	0.90	20.00	11.00	4.00	4000.00	225.00	4.50
0	18.80	0.90	20.00	11.00	4.00	4000.00	225.00	4.50
0	17.40	0.90	20.00	11.00	4.00	4000.00	225.00	6.50